

UB 360 qC199c 1919

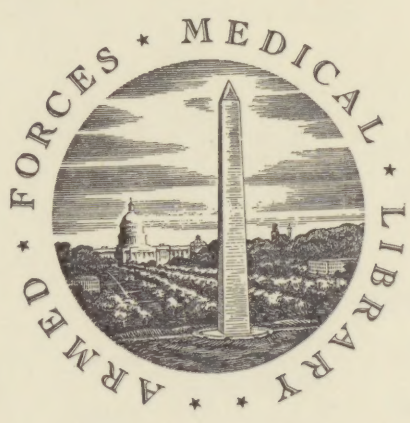
14030690R



NLM 05098475 5

NATIONAL LIBRARY OF MEDICINE

UNITED STATES OF AMERICA



FOUNDED 1836

WASHINGTON, D.C.

GPO 16-67244-1



LIBRARY
U. S. PUBLIC HEALTH SERVICE
WASHINGTON, D. C.

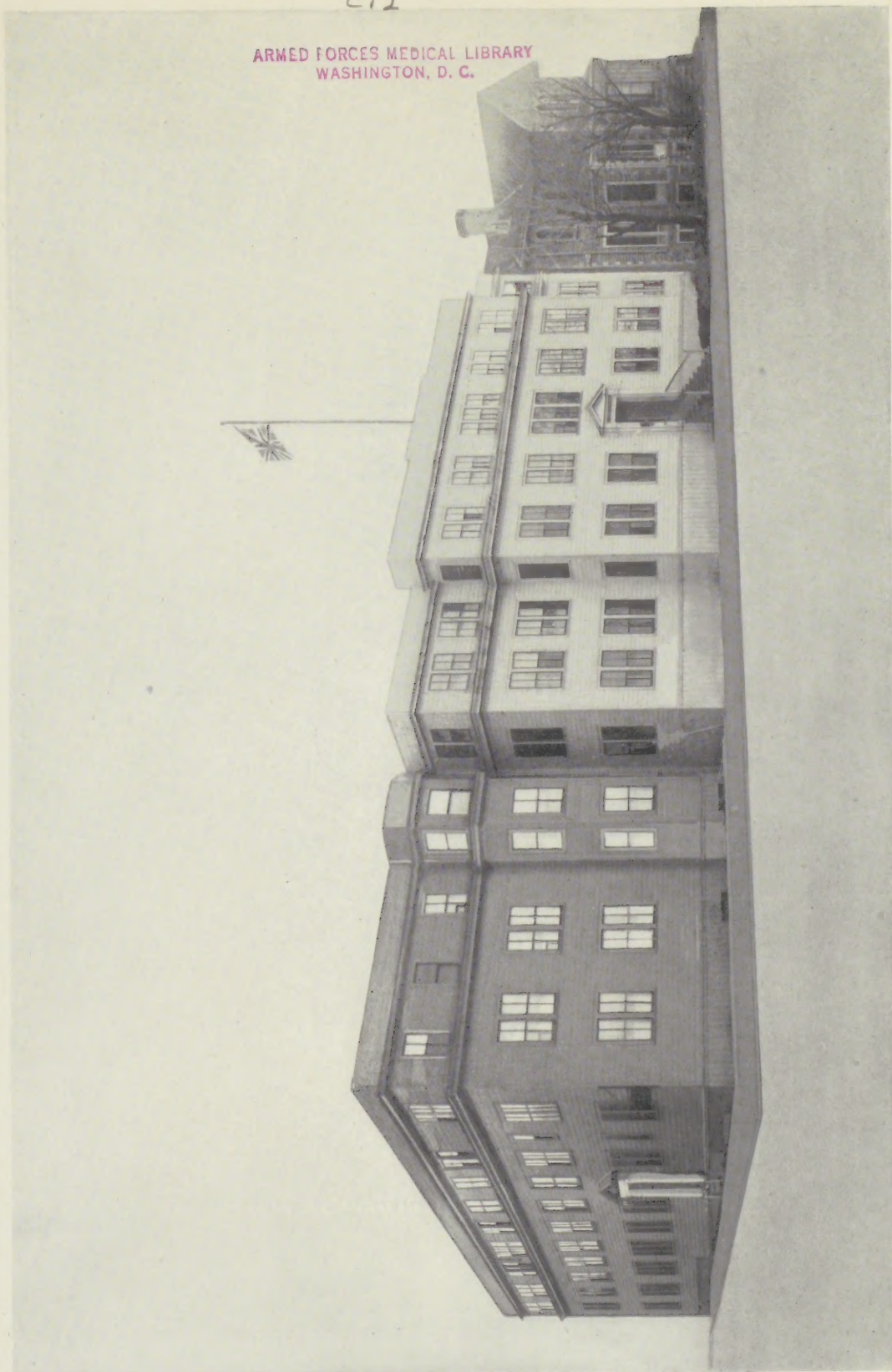
CANADA'S WORK *for* DISABLED SOLDIERS



ISSUED BY
Canada. THE DEPARTMENT OF SOLDIERS' CIVIL RE-ESTABLISHMENT
... OTTAWA, CANADA

LB
360
g C199 c
f 1919
c11

ARMED FORCES MEDICAL LIBRARY
WASHINGTON, D. C.



HEAD OFFICE OF THE DEPARTMENT OF SOLDIERS' RE-ESTABLISHMENT, VICTORIA STREET, OTTAWA.

Department of Soldiers' Civil Re-Establishment

Minister :

SENATOR, THE HONOURABLE SIR JAMES LOUGHEED, K.C.M.G., P.C., K.C.

Parliamentary Secretary :

LT.-COL. HUGH CLARK, M.P.

Deputy Minister :

F. GERALD ROBINSON,

who succeeded S. A. ARMSTRONG, who was appointed
Director of the Military Hospitals Commission, December, 1916,
and Deputy Minister, Department S. C. R., March, 1918, and acted
until July, 1918

Assistant Deputy Minister :

E. H. SCAMMELL

Director of Medical Services :

COLONEL E. G. DAVIS, C.M.G., M.D.

Director of Vocational Training :

N. F. PARKINSON, M.A.Sc.,
who succeeded W. E. SEGSWORTH, M.E., of Toronto, who
became Director of Vocational Training in July, 1917,
and acted until January, 1919

Director of Information and Service Branch :

MAJOR L. L. ANTHERS

Chief Inspector :

MAJOR C. G. ARTHUR, D.S.O.

General Superintendent Engineering Branch :

J. H. W. BOWER, B.A.Sc.

Director Orthopaedic and Surgical Appliances Branch :

MAJOR R. W. COULTHARD

Overseas Representative :

LIEUT. G. R. MIDDLETON (Acting)

What the Department of Soldiers' Civil Re-Establishment Does

THE MEDICAL SERVICES:—

1. Furnishes medical treatment to men discharged from the Department of Militia and Defence for further treatment under the Department of Soldiers' Civil Re-Establishment.
2. Furnishes medical treatment to ex-members of the Forces for recurrence of war disabilities.
3. Furnishes medical treatment for any disability, with certain exceptions, occurring within one year after discharge.
4. Furnishes medical treatment for vocational students during course of training.
5. Administers special general hospitals, sanatoria for tuberculous cases, and institutions for the care of long-treatment and mental cases.
6. Maintains out-patients' clinics at important centres.
7. Furnishes medical care in smaller communities through medical representatives.
8. Supervises out-patient treatment by means of social service nurses.

PERSONAL SERVICES UNDER THE CHIEF INSPECTOR:—

1. Keeps records and documents.
2. Administers pay and allowances for patients and their dependents.
3. Provides care of mental cases apart from medical attention.
4. Controls transportation issued to ex-members of the Forces on strength of the Department.
5. Maintains chaplain service.
6. Furnishes clothing on repayment basis to men on strength of the Department for treatment or training.
7. Operates canteens.
8. Provides for funerals of all deceased patients and arranges all matters pertaining to same, including notifying of next-of-kin and disposition of effects.

ORTHOPÆDIC AND SURGICAL APPLIANCES BRANCH:—

1. Furnishes artificial limbs and orthopædic and surgical appliances.
2. Provides for the repair and maintenance of artificial limbs and appliances.
3. Operates a factory for the manufacture of artificial limbs and orthopædic appliances.

THE VOCATIONAL BRANCH:—

Vocational re-training is provided for:—

- (a) Any former member of the Forces suffering from a disability due to war service such as prevents him from returning to his pre-war occupation;
- (b) Such ex-members of the Forces as enlisted under the military age of 18 and who, on account of war service, suffered a severe interruption to their training.

Provides occupational and curative training for ex-members of the Forces undergoing treatment in hospitals conducted by the Department of Militia and Defence and the Department of Soldiers' Civil Re-Establishment.

INFORMATION AND SERVICE BRANCH:—

1. Places ex-members of the Forces in touch with opportunities for employment.
2. Maintains a special section for placement of professional, technical and trained business men in touch with opportunities for employment.
3. Provides specific information as to government benefits available for ex-members of the Forces.

NOTE:—For further details see special articles per table of contents on next page following.

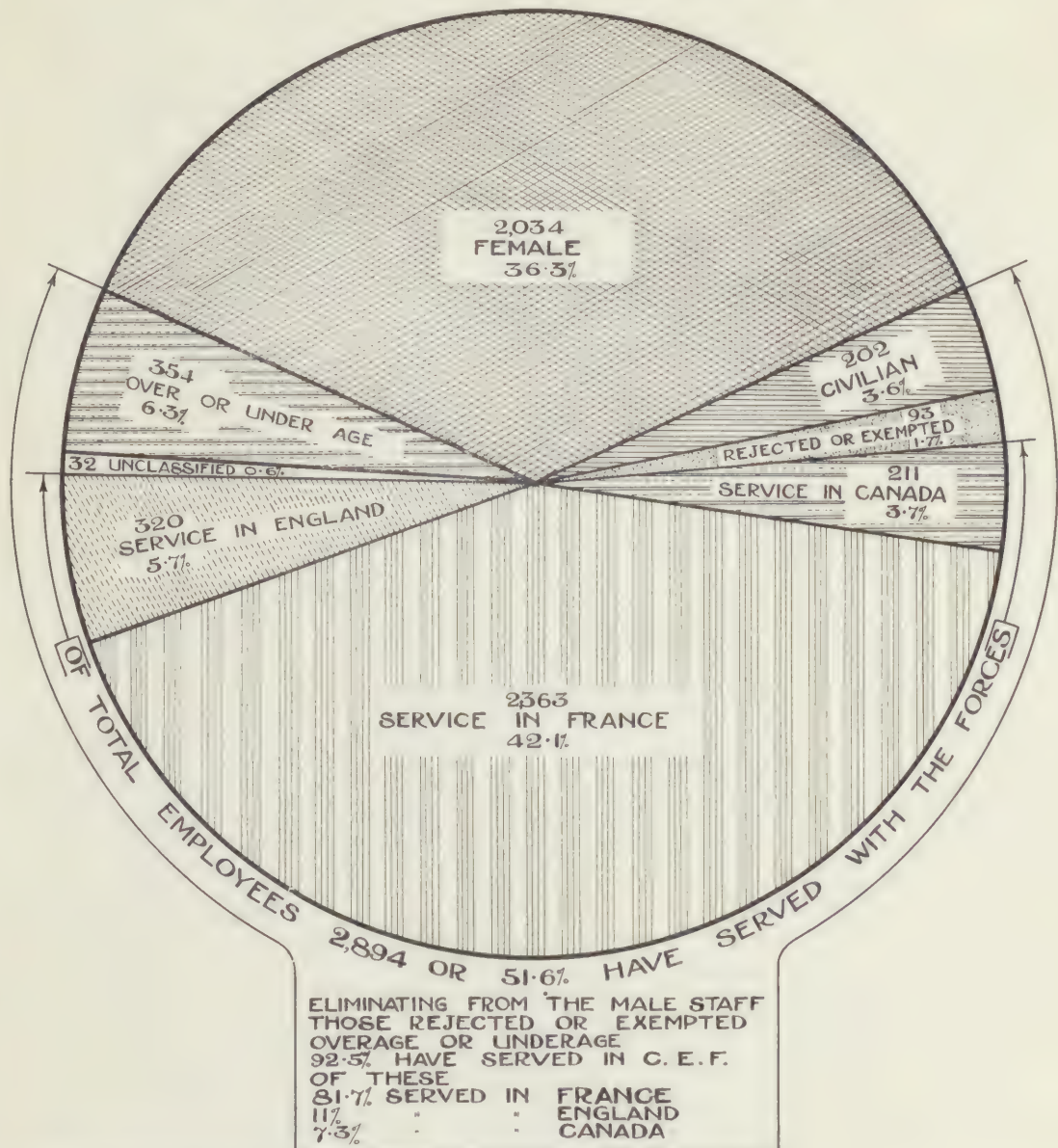
TABLE OF CONTENTS

	PAGE
INTRODUCTORY CHAPTER	7
THE MEDICAL SERVICES	11
ORTHOPÆDIC AND SURGICAL APPLIANCES BRANCH .	35
THE VOCATIONAL BRANCH	49
INFORMATION AND SERVICE BRANCH	83
CHIEF INSPECTOR'S BRANCH	87
THE DIETARY BRANCH	91
THE ENGINEERING BRANCH	97
SUPPLIES AND EQUIPMENT BRANCH	143
THE PURCHASING BRANCH	145
THE ACCOUNTING BRANCH	147

DEPARTMENT OF SOLDIERS CIVIL RE-ESTABLISHMENT
— STAFF THROUGHOUT CANADA —

BASED ON FIGURES OF JULY 31, 1919

TOTAL NUMBER OF EMPLOYEES 5,609



— EXPLANATION —

CHART SHOWS NUMBER OF
EMPLOYEES IN EACH
CLASSIFICATION, TOGETHER WITH
PERCENTAGE OF THE WHOLE

CHART 8-3

PREPARED BY
ACCOUNTING BRANCH
DEPARTMENT OF SOLDIERS CIVIL RE-ESTABLISHMENT
OTTAWA



Introduction



The organization of the Department of Soldiers' Civil Re-Establishment broadly resolves itself into:

1. General administration under the Deputy Minister.

2. Personal services to the ex-soldier undergoing treatment or training, such as pay, records, clothing, leave, dependent's interests, discipline, under a Chief Inspector.

3. Medical services under a Director of Medical Services.

4. Manufacture and maintenance of artificial limbs and appliances, under a Director of the Orthopædic and Surgical Appliances Branch.

5. Ward occupations, curative workshops, and industrial re-training under a Director of Vocational Training,

6. Placement of both the disabled and demobilized members of the Forces in touch with opportunities for employment, under a Director of Information and Service.

The general organization of the Department consists of headquarters at Ottawa and ten principal Units, corresponding with the Military Districts of the Department of Militia and Defence.

The executive personnel at the Head Office is as follows:—

Deputy Minister, Assistant Deputy Minister and Secretary, Director of Vocational Training, Director of Medical Services, Director of Information and Service, Chief Inspector, General Superintendent of Engineering Branch, Supervisor of Expenditure, with head of sub-branches, General Organizing Dietitian, Superintendent of Supplies and Equipment, and Chief Accountant. The Director of the Orthopædic and Surgical Appliances Branch has his headquarters at Toronto.

Each Unit is officered by an Assistant Director, a Unit Medical Director, a District Vocational Officer and a Unit Service Officer, with their necessary assistants. The following are the locations of the Units:—

Unit	Headquarters	Sub-Headquarters
Quebec	Montreal, P.Q.	Quebec, P.Q.
Nova Scotia and Prince Edward Island	Halifax, N.S.	Sydney, C.B. Charlottetown, P.E.I.
Eastern Ontario	Kingston, Ont.	Ottawa, Ont.
Central Ontario	Toronto, Ont.	Hamilton, Ont.
Western Ontario	Guelph, Ont.	London, Ont.
Manitoba	Winnipeg, Man.	Pt. Arthur, Ont.
Saskatchewan	Regina, Sask.	Saskatoon, Sask.
Alberta	Calgary, Alta.	Edmonton, Alta.
British Columbia	Vancouver, B.C.	Victoria, B.C.
New Brunswick	Fredericton, N.B.	St. John, N.B.
Yukon Territory	Dawson City	

The number on the staff at the Head Office and Units, including Hospital staff at the 31st July, 1919, was 5,609, made up as follows:—

		Per cent
Returned soldiers who have seen service in France	2,363	42.1
Returned soldiers who have seen service in England	320	5.7
Men who have seen service in Canada	211	3.7
Rejected or exempted	93	1.7
Boys under and men over military age	354	6.3
Male civilians	202	3.6
Women and girls	2,034	36.3
†Unclassified	32	0.6
TOTAL	5,609	100.0

Of the total staff, 2,894 or 51.6 per cent have served with the forces. Eliminating from the male staff the exempted or rejected, over age or under age, 92.5 per cent have served with the C.E.F. Of these, 81.7 per cent have served in France, 11 per cent in England, and 7.3 per cent in Canada.

PAY AND ALLOWANCES

It was early recognized that if men were to be re-trained for new occupations or if they were to be given periods of treatment in hospital after discharge from the Army or Navy, a scale

† A proportion of the unclassified are returned soldiers.

CHART 0-1

of pay and allowances would have to be authorized in order that the men themselves and their dependents might be properly maintained. The first scale was drawn up and approved by Privy Council in June, 1916. Owing to the increased cost of living and to other changes it has been necessary to extend the rates as originally arranged. The latest changes took effect in February, 1919, when an Order-in-Council was passed (P.C. 387) which provided the following rates:—

1. Men undergoing treatment:—

Pay of rank at time of retirement or discharge, plus the following allowances in lieu of Patriotic Fund Allowances for dependent or dependents of the former members of the Forces who held a rank below commissioned rank:—

Wife only.....	\$10.00
Wife and one child.....	19.00
Wife and two children.....	26.00
Wife and three children.....	31.00

For each child in excess of three, \$5.00 per month, with a maximum allowance of \$45.00 per month for wife and children.

2. Men undergoing training:—

Man without dependents.....	\$60.00
Man with wife.....	85.00
One child.....	10.00
Two children.....	18.00
Three “.....	25.00

For all children in excess of three, \$6.00 per month for each child.

Widower with one child.....	\$80.00
“ “ two children.....	88.00
“ “ three “.....	95.00

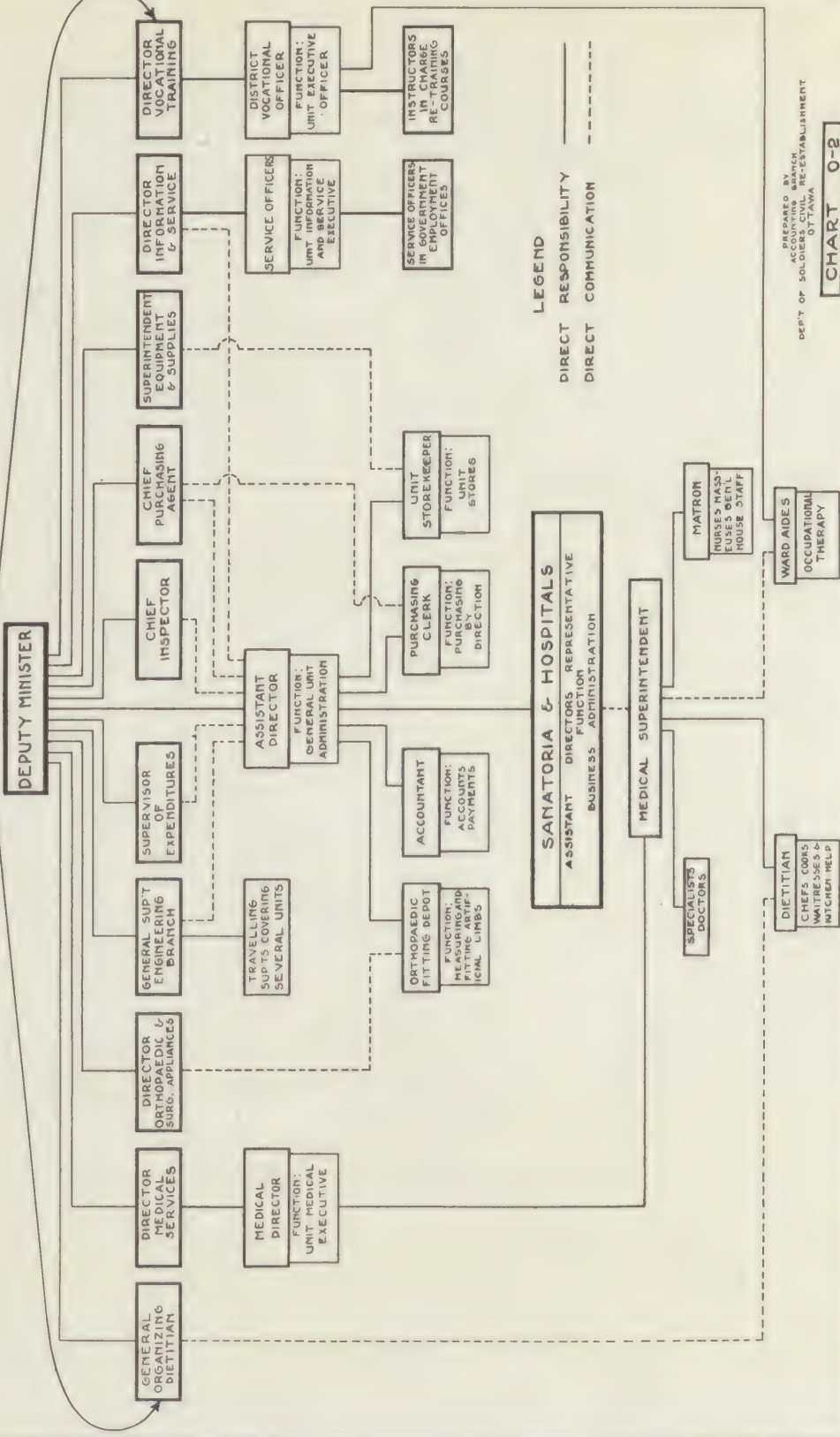
For each child in excess of three, \$6.00 per month.

Allowances are also granted for dependent parents and brothers and sisters. Provision is made for payment of additional expenses when it is necessary for men to live away from home in order to receive their training, and for deduction when they are subsisted at a public institution.

The development of the work of the Department to its present magnitude has been a gradual evolution. Through the medium of Orders-in-Council it has been possible, as new problems have presented themselves and new and unexpected situations have arisen, to provide machinery whereby the problems could be solved and the situations met. The work has been without precedent, and there has been on the part of the staff and officers of the Department a whole-hearted desire to give to the returned soldier the best service in their power and to meet his needs in a way which would reflect the desire of the people of Canada in his behalf.

STANDARDIZED ORGANIZATION ALL UNITS THROUGHOUT CANADA

HEAD OFFICE OTTAWA



PREPARED BY
ACCOUNTING BRANCH
DEPT OF SOLDIERS CIVIL RE-ESTABLISHMENT
OTTAWA

CHART 0-2

The Medical Services

By Col. E. G. Davis, C.M.G., M.D.,
Director Medical Services.

The Medical Branch of the Department of Soldiers' Civil Re-Establishment deals with the ex-members of the Canadian and Imperial forces resident in Canada or the United States. The work may be divided into the following classifications:

(a) Those patients transferred as patients direct from the Department of Militia and Defence, i.e., before discharge from the army the men are medically cared for by the Canadian Army Medical Corps, who bring the case to completion of treatment if such case is to be of short duration; but if the illness will be of long duration the patient is discharged from the army with a recommendation for further treatment by the Department of Soldiers' Civil Re-Establishment.

(b) Cases already discharged from the army suffering from recurrences of a disability due to or aggravated by service.

(c) The medical care of all ex-members of the forces for one year after discharge from the service (or from the S.C.R. if they were direct discharges from C.A.M.C. to S.C.R.) for any unpreventable illness not caused by service.

(d) Medical care of men undergoing industrial training.

Class (c) does not receive pay and allowances while under treatment, but classes (a) and (b) do, according to the time incapacitated from employment.

Patients may be classified in other ways, such as according to the nature of disease or ailment, for example: Wounds, general diseases, tuberculosis, insanity, feeble-mindedness, epileptics, neurological, orthopædic, dental, venereal, etc.

Or again, patients may be divided according to the amount of incapacity for employment in conjunction with treatment, for example:—

(a) *In-patients*.—Those requiring care in S.C.R. or allied institutions.

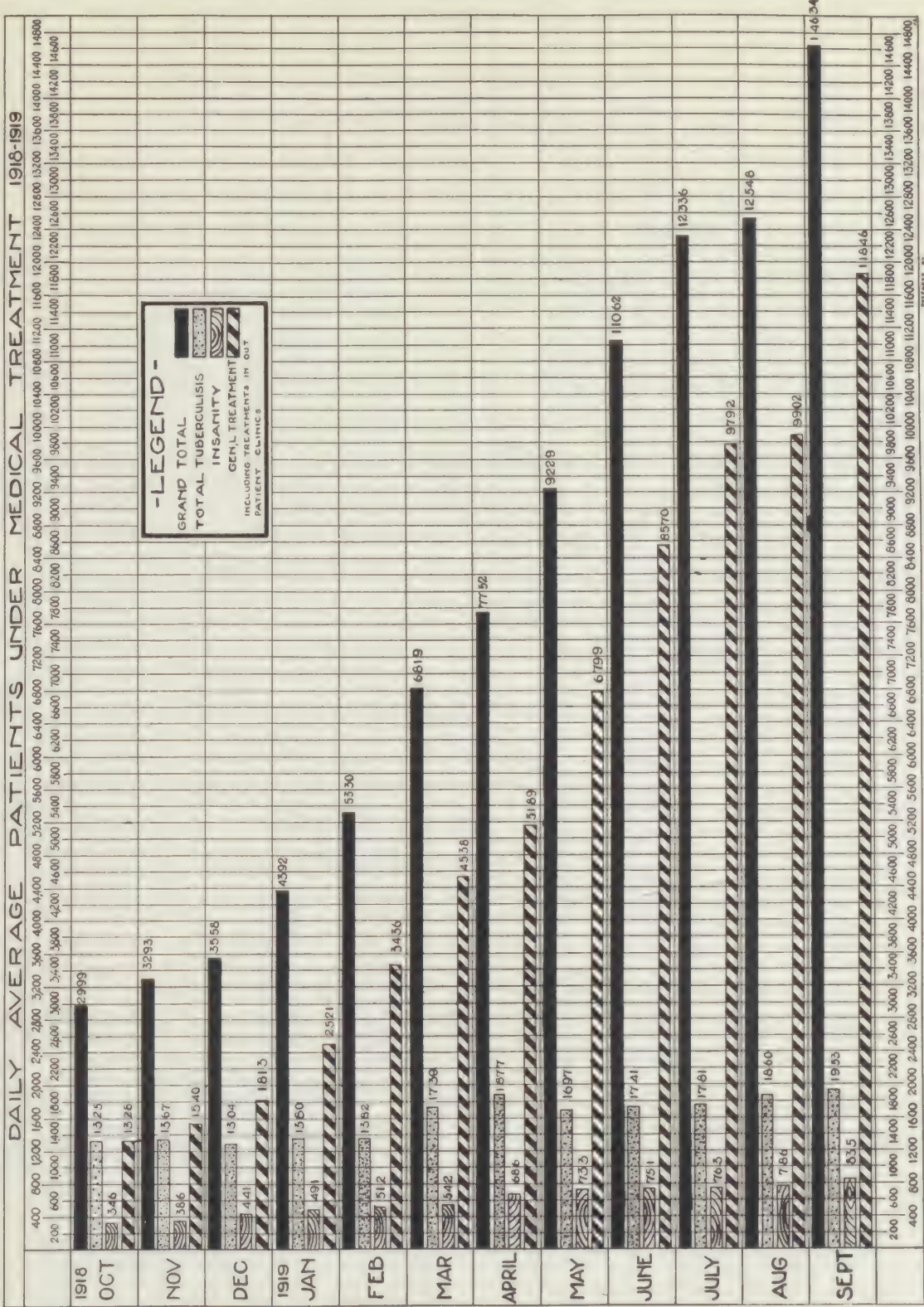
(b) *Out-patients, Class I*.—Those not requiring hospital care, and yet unable to attend to any employment while under treatment.

(c) *Out-patients, Class II*.—Those requiring treatment, but able to attend to employment other than during the hours of attendance for treatment.



GROUP OF BUILDINGS COMPRISING NOVA SCOTIA SANATORIUM, KENTVILLE, NOVA SCOTIA.

DEPARTMENT OF SOLDIERS CIVIL RE-ESTABLISHMENT



ORGANIZATION OF MEDICAL BRANCH

In the general head office at Ottawa there is, in co-operation with the other branches, the head office of the Medical Branch, consisting of the Director Medical Services and staff.

Canada is divided, for purposes of administration, into units, which correspond approximately to the Military Districts. In each unit there is suitably located a Unit Central Office, part of which is medical, consisting of a Unit Medical Director and staff. Also in the unit are the necessary medical staffs for clinics, hospitals, sanatoria, dispensaries, etc. At the outside places throughout all parts of Canada, medical representatives have been appointed in towns and villages, so that patients will have quick and easy access to them, and avoid expense of transportation and annoyance to the patient. These medical representatives are paid according to a schedule of fees, and only for the actual work done. There exists a system for authorization, reports, records, etc.

Doctors are employed under three headings, according to the work involved: Full time, part time, and on schedule of fees.

Patients are treated, whenever possible, near their homes, or may be transferred to a centre for their benefit, to be given more expert care, or to a hospital or sanatorium because of the nature of the case and availability of such accommodation.

GENERAL STATEMENT OF THE WORK

The growth and activities of the medical branch have been tremendous. In June, 1918, the number of patients cared for was 1,200, and the patient strength at September 1, 1919, including in-patients and out-patients, was over seven thousand. This figure represents only a small portion of the amount of medical work, including medical reports, expert advice, special examinations, Board of Pensions Commissioners examinations, reports, etc., interviews, personal and otherwise, which of necessity follow when dealing with large numbers of men and their relatives.

COMPOSITION OF PERSONNEL

It is the policy of the department to employ doctors, nurses, and medical orderlies similarly as in the other branches; that is, those with overseas experience, and preferably those of previous local residence. It must be stated that great difficulty was experienced in this respect in the earlier days, as such overseas staff could not be spared from the Canadian Army Medical Corps, and in places non-overseas staff had necessarily to be secured; but these have been steadily and gradually replaced as suitable overseas personnel became available. Also, in certain towns and villages it may never be possible to employ overseas men, as such medical men may not be resident there.

HOSPITALS

The medical services are conducted with the chief aim of efficiency in the treatment of the patient, and in his best interest, and yet with due consideration of economy; and it is desired that there should be no over-lapping of hospitals by the military or civil authorities.

It was not considered advisable to establish a double chain of general hospitals from coast to coast, duplicating those of the Department of Militia and Defence, as this would have involved both a waste of public money and a waste of medical officers and nurses. For this reason, with the exception of the sanatoria for the treatment of tuberculosis, hospitals for long-treatment cases, and clinics and dispensaries, wherever there was accommodation or the plan was feasible, it was decided that the military hospitals should be utilized for the treatment of ex-service patients on the strength of this Department. In towns or cities, where there are no military hospitals, or when the patient is too ill to be moved to such hospitals, he is treated in the civic hospital nearest to his home. This arrangement is of medical advantage to the patient as well as economical to the country as a whole. It obviates the necessity of furnishing transportation for long distances, and at the same time shortens the length of time



CALDERWOOD HOSPITAL, KINGSTON.



SPEEDWELL HOSPITAL, GUELPH. FRONT VIEW OF THE INSTITUTION.

during which the patient is away from his work. Exception is made in connection with orthopaedic and neurological cases, where there are certain definite medical centres where the best specialists (physicians and surgeons) are available. In general, these cases are transferred to such centres.

Appended is a list of hospitals and sanatoria which are operated by the Department of Soldiers' Civil Re-Establishment, with the situation of each and the number of patient beds; also a list of other hospitals, not under control of this department, but offering a definite number of beds for Soldiers' Civil Re-Establishment cases.

TREATMENT OF CASES OF TUBERCULOSIS

Soldiers who develop tuberculosis while on service, and who are returned to Canada for further treatment, immediately upon diagnosis are transferred by the military authorities to the Department of Soldiers' Civil Re-Establishment and are sent to one of the various sanatoria under the direction of this Department.

The total number of cases of tuberculosis which have been treated up to the present is approximately 7,000. Less than 5 per cent of these cases have died; about 20 per cent have become arrested; about 25 per cent have become quiescent; a large proportion of the balance have improved more or less; a small proportion have left institutions of their own accord and have refused further treatment, for family or other personal reasons. Records show that 75 per cent of those ex-members of the forces who have fallen a prey to the disease, and who have been treated in sanatoria of this Department, are able to resume useful occupations in civil life.

About one year after the commencement of hostilities, the Military Hospitals Commission, from which the Department of Soldiers' Civil Re-Establishment has evolved, undertook the medical care of soldiers suffering from pulmonary tuberculosis. At that time (August, 1915), the sanatoria throughout Canada for the most part were very small, and were inadequate to meet the needs of the war situation. With the thorough medical examination of

recruits, soldiers in Canada and soldiers who had done service overseas, the detection of cases of pulmonary tuberculosis received a tremendous impetus. There is no doubt that in civilian life thousands of cases of this disease which have been discovered in the army would not have been subjected to medical examination until the disease was far advanced, and with little prospect of cure. It became evident, as the numbers of cases of this disease in the army were discovered, that much more extensive provision for their accommodation and treatment would have to be made than had existed in pre-war days.

To secure accommodation urgently required, arrangements were made throughout Canada for the use of portions of existing sanatoria. In some cases necessary extensions to these institutions were made, the Department sharing in the capital cost thereof. In other cases arrangements were made, either with Provincial Governments or Societies interested in the care and treatment of tuberculosis, whereby new sanatoria were built, the capital cost of which was shared with the Department. This policy reduced enormously the capital expenditure which would otherwise have been necessary by the Department, and greatly increased throughout Canada the facilities for combating the spread of tuberculosis generally amongst the civil population.

After the present emergency with respect to the treatment of tuberculous ex-members of the Forces has passed, these increased facilities will be available towards effectively stamping out the scourge of tuberculosis in this country.

In every sanatorium where patients of the Department are treated, the high standard set by the Department as to quality of treatment, food, attendance, and general service is strictly maintained under frequent inspections by medical as well as lay representatives of the Department.

At the present time (September 13, 1919), the Department has 1,848 tuberculous patients under treatment in twenty-six (26) sanatoria throughout the Dominion. Twelve of these sanatoria are the property of the Department,



LANCASTER HOSPITAL, ST. JOHN, NEW BRUNSWICK.



SHAUGHNESSY HOSPITAL, VANCOUVER, BRITISH COLUMBIA.

or have been leased for a term of years, and are under the control of the Department. Eight of the others have been enlarged, and the accommodation vastly improved.

The advantages of the Canadian system have been recognized and complimented on by other Allied countries.

It was early recognized that patients in sanatoria found the time dragging heavily during the idle hours, and for this reason ward occupations were introduced by the Vocational Branch of the Department. Such work as basket-weaving, toy-making, painting, light cabinet-making and other useful handicraft work, has been taught continuously. Instruction is also given in stenography, commercial practice, book-keeping, draftsmanship, etc. All work of this nature is subject to the advice of the Medical Superintendents of sanatoria, to ensure that the occupation which will best assist in the cure of each patient is taught to him, and to prevent the possibility of a patient being engaged in an occupation which might retard his improvement.

It is understood that other Allied nations are following the example which Canada has set, and are introducing ward occupations and Vocational Training in their sanatoria. There can be no doubt that ward occupations act as occupational therapy. In other words, the interest which the patient develops in his work has a beneficial effect through the mind upon the body, and actually assists in the cure of the disease. Many civilian institutions have taken advantage of the knowledge which has been gained by the Department in connection with ward occupations as a curative agent in the treatment of pulmonary tuberculosis, as well as the other forms of treatment which have been adopted, and it is quite evident that in the future this will be one of the accepted therapeutic agents in the treatment of this disease.

The work of the Department of Soldiers' Civil Re-Establishment in connection with tuberculosis has upset a number of theories which have been more or less generally accepted in connection with the treatment of pulmonary

tuberculosis. For instance, it has been found that a high altitude is not necessary in the treatment of this disease; that patients do as well in low or moderately high altitudes as in the mountains; and that proximity to a lake or the sea does not militate against the probabilities of improvement or cure.

The latter point has been amply demonstrated at the Mowat Memorial Sanatorium, at Kingston, Ontario, which is within half a mile of Lake Ontario, and the Nova Scotia Sanatorium at Kentville, Nova Scotia, which is within a few miles of the Atlantic Ocean:

The old idea that tuberculosis was contracted in adult life has given place to later knowledge in which it has been proved, almost beyond a doubt, that tuberculosis is contracted in childhood, when the tissues are softer and more susceptible to the germs of the disease. The large numbers of nurses, doctors, orderlies, etc., in these sanatoria, who work year by year in close contact with the patients without developing the disease, prove that the condition is not contagious to adults. On the other hand, it must be remembered that adults do break down with tuberculosis, but this is practically always a recrudescence of a condition which existed in childhood. It can be demonstrated that between 90 per cent and 95 per cent of all individuals suffer at some period during their lives from some form of tuberculosis, and the healed lesions may be found upon autopsy.

The use of the X-Ray, which has been found so important in the diagnosis and the prognosis of pulmonary tuberculosis, has been developed to a very high degree, and in practically every sanatorium in Canada where ex-soldiers are being treated, the Department has installed the best electrical apparatus which it is possible to secure.

The greatest attention has been devoted by the Department of Soldiers' Civil Re-establishment to the development of scientific treatment. The three great essentials of this are: good food, fresh air and rest. Trained dietitians are placed in every sanatorium, and, working under the instructions of the physician in charge, they



PLENTY OF SUNSHINE. A TYPICAL WARD FOR CONVALESCENT PATIENTS.



PAVILION FOR CONVALESCENT PATIENTS DESIGNED BY THE ENGINEERING BRANCH,
DEPARTMENT OF SOLDIERS' CIVIL RE-ESTABLISHMENT.

arrange meals which are not only daintily served and appetizing, but have the greatest caloric value and are substantial and highly nourishing. Special arrangements are made to see that every patient gets his food served hot; and fruits, fresh meats, eggs, milk, cream and everything essential are served in all sanatoria.

In order that the fresh-air treatment may be properly carried out, pavilions are built in such a manner that patients sleep and rest practically in the open air, and without any artificial heat, on the balconies. On the other hand, the corridors of each pavilion, and the wash rooms and dressing rooms for each patient, are well heated, so that when a patient has to leave his bed during either the day or the night, he may pass at once into a properly heated atmosphere.

Some men who have suffered from pulmonary tuberculosis, and in whom the disease has been arrested, may not be able to return to their former occupations owing to the danger of relapse, but in such cases arrangements may be made by the Vocational Branch to see that they are taught an occupation which is consistent with their changed physical condition. In this way a great advance has been made towards maintaining the patients in good health after the disease has been arrested.

The Department has secured some of the most competent specialists in the treatment of tuberculosis in Canada, and ex-soldier patients receive every possible care under the most beneficial conditions, as is demonstrated by the results.

TREATMENT OF THE INSANE

The policy hitherto followed has been to carry out the treatment of ex-soldiers suffering with mental disabilities, particularly those of a permanent nature, in the various Provincial Hospitals for the Insane throughout the Dominion.

So far as is practicable, mental cases discharged from the army for further treatment are admitted first to a clearing hospital operated by the Department at Newmarket, Ontario (150 beds). Many patients on discharge from this

hospital have recovered or are sufficiently improved to be able to go to their homes, thus avoiding the necessity of transfer to a Provincial Institution.

The hospital at Newmarket has been in operation since the Autumn of 1917, and for the most part only the severer mental cases have been sent there. Bearing this fact in mind, it is gratifying to note that during 1918 approximately one-third of the patients discharged from this hospital were either recovered or so far improved as to be suitable for return to their homes.

In some quarters a sentiment has existed against the reception of mentally disordered soldiers into the Provincial Hospitals for the Insane. It is felt that this sentiment cannot altogether be defended. Many of these institutions are excellent, the buildings modern and comfortable, well-equipped and well-kept. It is true that not all the Provincial Hospitals are of equal merit, and in certain of the older ones suitable accommodation may not be readily available. The chief disadvantage under which these hospitals have been operated has been a serious depletion both of medical staff and nursing personnel, owing to war conditions.

In most of the Provinces, accommodation for mental patients is very limited, and quite generally extensions are either being provided or in prospect. Particularly in the Province of Ontario has the need of increased accommodation been felt, largely owing to the fact that the provincial authorities have given generously of accommodation intended for this purpose to provide buildings urgently needed for other classes of ex-soldier patients. To meet this need and to provide for the cases still returning from overseas, the Westminster Military Hospital at London, Ontario, the erection of which had been commenced, was recently taken over by the Department of Soldiers' Civil Re-Establishment, and is now being converted into a mental hospital of about 500 beds. It is intended that this institution shall embody in accommodation, equipment and treatment facilities, all the essentials of the modern psychiatric clinic. Special emphasis is being laid upon the comfort



A VIEW OF THE NURSES' PORCH AT LEEK ISLAND SANATORIUM. THIS COMFORTABLE HOME IN THE THOUSAND ISLANDS WAS GENEROUSLY LOANED TO THE DEPARTMENT BY MR. AND MRS. IRA KIP.



LEEK ISLAND. SIDE VIEW OF SANATORIUM SHOWING THE CROQUET LAWN.

of the patients, their dietary needs, suitable ward classification and segregation, hydro-therapy and other special treatment methods, separate provision for tuberculous cases, recreational advantages, and extensive occupational therapy. Here it is proposed that ex-soldiers suffering from mental diseases shall be given such care and treatment as will ensure the best possible hopes of recovery. Additional acreage has been taken over by the Department in connection with this institution, as farm land for purposes of occupational therapy.

It is to be borne in mind that well over 50% of the cases of actual mental disease or defect among discharged men belong to the permanent or chronic type and are similar in every respect to the mental disabilities prevalent among the population of asylums generally. Where recovery is not to be expected, efforts are directed toward such conservation of mental capacity as may be possible. Many patients are thus prevented from deteriorating completely; and by means of occupation and manual training, others, especially the higher defectives, may make great improvement.

The Department has appointed an expert psychiatrist, as Inspector of Mental Hospitals for the Department, who, after inspecting each mental institution in Canada where patients of this Department are being cared for, is making suggestions for improvement where this is desirable. These suggestions are being taken up with the various provincial governments concerned.

LONG-TREATMENT CASES AND INCURABLES

Fortunately, owing largely to the work of Occupational Therapy and Ward Occupations, which have been so highly developed during the present war, particularly in Canada, which led the way in this work, the number of ex-members of the forces considered as incurable or completely disabled has been kept down to a minimum. While there is no doubt that another year will reveal a larger proportion of such cases, up to the present it is satisfactory to know that a very small number (other than those suffering from insanity and tuberculosis), have developed

amongst those ex-members of the forces returned to Canada for further treatment.

The department operates institutions for these men, one at Toronto, Euclid Hall; one at Montreal, Mount Royal Hospital, and one at Victoria, B.C., Craigdarroch Hospital. The patients in these institutions are mostly men who, for example, have been shot through the spinal column and are partly or completely paralyzed. A large staff of nurses and occupational-therapy workers gives them constant care, and in a recent inspection the men, in spite of their unfortunate condition, seemed happy and contented.

It is interesting to note that a not inconsiderable proportion of those ordinarily classed as "incurable" respond satisfactorily to occupational treatment, even though such treatment must be carried out in conjunction with other medical or surgical treatment over a very long period.

It is considered that all the efforts of the Vocational and Medical Branches of the department in these cases are amply rewarded by the results. Perseverance in treatment towards cure in these hospitals for long treatment is considered preferable to placing patients ordinarily classed as "incurable" in homes for incurables to await tediously the end of their lives, rendered inactive by war service.

It has become evident that other hospitals for long treatment will have to be established in other parts of Canada. It is kept in mind that as the amount of active-treatment work diminishes in a few years to come, more provision will have to be made for long-standing cases; and in selecting the sites of our present accommodation, this point is kept in view, so that such accommodation may be utilized in the future advantageously for these long-standing cases.

EPILEPTICS, FEEBLE-MINDED AND PROBLEM CASES

It was thought that it might be necessary to establish provision in both Eastern and Western Canada for permanent care of epileptics, feeble-minded, and such classes of cases. However, it is realized that these men cannot be forced to



NURSES' HOME DESIGNED BY THE ENGINEERING BRANCH, DEPARTMENT OF SOLDIERS' CIVIL RE-ESTABLISHMENT.



MOUNT ROYAL HOSPITAL, MONTREAL, FOR THE CARE OF LONG-TREATMENT CASES.

enter these institutions, and even if persuaded to enter some establishment, such as a colony, they might remain there but a few days and wish to return to their friends.

An effort was made recently to locate cases of epileptics after discharge from the army, to communicate with them and to see what proportion would be willing or desirous of entering institutions for their care; also to find out the number and frequency of fits and the amount of disability. The results were very unsatisfactory, but few patients even answering the correspondence, and a very small percentage were even willing to accept such treatment.

It is considered, nevertheless, that certain provision will have to be made for feeble-minded, or cases of low mentality, and in the new Psychiatric Hospital at London, Ont., accommodation will be set aside for this type of case.

ORTHOPÆDIC CASES

A factory for the manufacture of artificial limbs and appliances has been established at Toronto, and there has been a very rapid development in the type of artificial limbs and appliances, based partly upon the experiences of the manufacturers overseas and in America, and partly upon original research at the factory. In this work Lieut.-Col. Clarence L. Starr, the chief orthopædic consultant for the Department of Militia and Defence, has given valuable assistance.

It has been found that the best method in connection with artificial limbs is to give the patient a peg leg to wear until the stump has properly shrunk. A good deal of the dissatisfaction which occurred in the early days of the war was due to the fact that artificial limbs were made and fitted before the stump had properly shrunk, the result being that when the stump had assumed its permanent size and shape, the artificial limb no longer fitted it. This has been largely obviated by the supplying of temporary peg-legs.

The system by which men secure artificial limbs or surgical appliances throughout the various provinces, is by direct application to the Medical Director of the Unit concerned, who, after examination, issues a prescription for the required appliance. The patient is then sent to the fitting room, where the fitter receives instructions as to what is necessary, and completes the apparatus, which is afterwards inspected by the orthopædic surgeon of the Unit to see that the appliance is satisfactory. When men live at a distance from these fitting depots, they are given transportation and necessary expenses while travelling to and from the fitting centres.

An orthopædic surgeon has been appointed in connection with the Medical Branch to do duty at the factory in Toronto, not only to assist with suggestions for improvement in appliances, but to examine all cases that report for appliances, and see that they get suitable apparatus. In addition to this he teaches the medical men from the other provinces who are sent to Toronto for instruction in this new and most necessary work.

Over 90 per cent of the members of the Canadian Forces who require artificial limbs have been satisfactorily fitted with appliances manufactured in the factories of the Department. Amputation cases totalling over three thousand have been fitted with artificial limbs; special orthopædic boots to the extent of over four thousand pairs have been provided, and a grand total of about fourteen thousand amputation and orthopædic cases have received attention to their needs.

TREATMENT OF VENEREAL DISEASES

It became increasingly evident, for the protection of the public, for the individual ex-soldiers concerned, and for the sake of the future of Canada, that men suffering from venereal diseases, contracted during or previous to war service, when they demanded further attention, should receive it under the care of this Department. It was a fair presumption that any soldier whose condition was quiescent previous to enlistment, enlisted in good faith; and that



FRONT AND WEST ELEVATIONS OF LAURENTIDE INN, STE. AGATHE DES MONTS, QUEBEC.



DALTON SANATORIUM AT NORTH WILTSHIRE, PRINCE EDWARD ISLAND.

any soldier who contracted the disease during service, and took the necessary treatment in order to refit himself for the firing line, was deserving of further consideration. There is no doubt that conditions such as these, which might have remained quiescent for many years, or for a lifetime during a quiet and uneventful civil career, might easily be rekindled during the excitement, rough life and strain incident to war service. For these reasons it was considered that such patients should be given treatment where the condition was evidently a recurrence, and not contracted since discharge.

Genito-Urinary clinics, to take care of venereal disease cases, have been established at the various large centres from coast to coast.

DENTAL TREATMENT

The present policy of the Department of Soldiers' Civil Re-Establishment is to give

dental treatment, either by dentists on the staff of the Department, or by special arrangement with civilian dentists, at outside points, to ex-soldiers who are patients on the strength

for vocational training or medical treatment; also to such cases as require dental treatment for repair of direct damage to the jaw or teeth resulting from war service. This class includes cases of recurrence of infected mouth due to service, which require treatment for a toxic systemic condition, if the medical examiner finds the general condition due to the recurrence of oral infection.

The first class, being under medical treatment or vocational training, is on the strength of the Department for pay and allowances, provided that the condi-

tion requiring treatment is due to service.

The second class, i.e., those requiring dental treatment for direct damage to jaw or teeth due to service, receives either full pay and



VIEW OF A DENTAL CLINIC CONDUCTED BY THE DEPARTMENT OF SOLDIERS' CIVIL RE-ESTABLISHMENT, SPEEDWELL HOSPITAL, GUELPH, ONTARIO.



INTERIOR OF WARD, PRINCE OF WALES HOSPITAL, DRUMMOND STREET, MONTREAL.



PATIENTS IN SOLDIERS' CIVIL RE-ESTABLISHMENT HOSPITAL TAKING HYDRO-THERAPEUTIC TREATMENT.

allowances or is taken on the strength as an out-patient, class 2, and granted allowances for the time lost in attending for treatment, according to the circumstances of the case.

It is understood that the Canadian Army Dental Corps completes the ordinary dental treatment for men discharged with dental certificates.

SOCIAL SERVICE WORKERS

An outside nursing service is in operation for the purpose of tracing up such cases as have been discharged from the hospitals, with a view to determining whether the home treatment which has been prescribed is being properly carried out, and that the conditions under which the patients are living are conducive to their improvement. It became apparent that the Social Service System has a definite place in the organization of the various units of this Department, and it has been decided that for this form of work the services of trained nurses would be utilized.

The objects of this work are as follows:—

(a) The following up of *cases of tuberculosis* on leave from sanatoria, to see that they are taking proper care of themselves, *i.e.*, taking the rest which has been prescribed; that their habits are conducive to good health, and also to see that their housing and environment are helpful to their cure. In connection with house visits the Social Service Worker may, by interviews with the wives or families of patients, secure not only assistance in following up the cases, but intelligent co-operation toward the cure. If a recurrence of the disease has supervened, the Medical Officer may be thus warned in time to return the patients to sanatoria.

(b) The following up of *mental cases on probation*, to see that their habits are temperate and not likely to interfere with their mental condition. To report any recurrence of symptoms, and to advise the wives or immediate families of the patients regarding the necessary rules and care which should be followed.

(c) The following up of *Class I Out-Patients* to see that they are not working, and thus mili-

tating against a quick recovery; that their habits are temperate, etc.

(d) To investigate the circumstances of the dependents of ex-soldiers, and to see that the number of dependents claimed actually exist.

(e) To secure any confidential information which may be desired by the Assistant Director, the Representative of the Information and Service Branch, the District Vocational Officer or the Unit Medical Director.

(f) To act as advisers to the wives and families of ex-soldiers, who need encouragement or assistance.

(g) To carry out any nursing or observatory duties with reference to ex-soldiers which the Unit Medical Director may advise.

Cases of distress, of financial hardship, or medical emergency have precedence in investigation over all other cases.

TREATMENT OF EX-MEMBERS OF THE IMPERIAL FORCES IN CANADA, OF EX-MEMBERS OF THE UNITED STATES FORCES IN CANADA, AND OF EX-MEMBERS OF THE CANADIAN FORCES IN GREAT BRITAIN AND THE UNITED STATES

By mutual arrangements between the Imperial, United States, Newfoundland, and Canadian Governments, provision has been made whereby ex-soldiers of the one country receive treatment, for disabilities due to war service, in the other country when resident there.

THE "MEDICAL QUARTERLY"

Medical work in connection with the civil re-establishment of ex-soldiers is rapidly assuming a broad and comprehensive character; not only in the treatment of the tubercular, the insane, the epileptic, incurable and chronic cases, but with that much more numerous class of cases included under the general term: "recurrence of war disabilities." For this reason, and in order that those physicians and surgeons employed by the Department, as well as the medical profession generally, may be thoroughly familiar with the latest methods of treatment in

connection with the various *post bellum* medical problems, the Department of Soldiers' Civil Re-Establishment publishes a "Medical Quarterly," issued jointly by the Department and the Board of Pension Commissioners.

This "Medical Quarterly" is available to all physicians, surgeons, organizations and institutions interested in the work of rehabilitation of the ex-soldier, and upon application to the Department the names of such are entered upon the regular mailing list for this publication. The first number was published in January, 1919.

It is hoped that this publication will present an opportunity which will be taken advantage of by the profession for the dissemination of medical knowledge of a general nature as applied to the rehabilitation of the ex-soldier, not only as it affects his physical condition, but his mental attitude toward social and economic life. All physicians and surgeons, whether employed by the Department or not, who have anything of interest to record in connection with the treatment and after-care of ex-soldiers, are invited to contribute to this Quarterly in order that there may be free interchange of information which will not only be beneficial to the ex-soldiers of the present war and the public generally, but, to a certain extent, will act as a permanent record for the use of future generations.

GENERAL OBSERVATIONS

It is likely that, by the end of another year, with the exception of the military hospitals necessary for the various garrisons throughout the country, a large number of the military hospitals will be transferred to the Department of Soldiers' Civil Re-Establishment by arrangement with the Militia Department. This is a natural process of evolution. It is self-evident that the men should be re-established in civil life as rapidly as possible, and the longer they are kept in uniform the less early will they commence to think of their future as civilians. At the same time, such a transfer of institutions is an economic one, for while

they are no longer useful for military purposes, they can be utilized to advantage in the treatment of recurrences of war disabilities after discharge, and may, at a later date, if necessary, be utilized as homes for permanently debilitated or disabled ex-soldiers.

It is impossible at the present time to estimate the extent of the medical work for ex-soldiers and sailors which the future will involve, but with an enlistment of approximately half a million men in the Canadian Expeditionary Force, it is conceivable that when demobilization is completed, the work of this Department will be very extensive, and will call for the employment of a staff of physicians and nurses and other medical attendants for some years to come.

The policy of the Department has been not only to secure the services of those who have done overseas duty with the Canadian Expeditionary Force, but to see that the very best physicians and surgeons available are employed. Such a policy is not only of the utmost importance to the welfare of the individual ex-member of the forces, but will be of ultimate economic value to Canada. Proper medical, physio-therapeutic and re-educative treatment will inevitably avoid the distressing and unfair social calamity which has followed former wars in all countries, *i.e.*, the pauperization of disabled soldiers.

It is interesting and very gratifying to know that with the present system of medical treatment, followed as it has been by occupational therapy and industrial re-training, the prospective number of dependents upon public funds or upon private charity will be reduced to a minimum.

The Medical Branch of the Department has had a gigantic work, and is effectively grappling with it, and when the ex-soldier finally regains health and strength, so far as it is possible for modern science to restore it, he will once more be in a position to resume responsible citizenship with all its privileges and duties.

INSTITUTIONS OPERATED BY THE DEPARTMENT OF SOLDIERS' CIVIL RE-ESTABLISHMENT
GENERAL TREATMENT HOSPITALS

Name	Place	Total No. of Patient Beds
<i>"A" Unit.</i>		
Prince of Wales Hospital.....	Montreal, P.Q.....	250
Mount Royal Hospital.....	Montreal, P.Q.....	35
St. Anne's Hospital.....	Ste. Anne de Bellevue, P.Q.....	500
Dorchester Hospital.....	Montreal, P.Q.....	35
<i>"B" Unit.</i>		
Rena McLean Memorial Hospital.....	Charlottetown, P.E.I.....	141
Moxham Hospital.....	Sydney, C.B.....	70
Camp Hill Hospital.....	Halifax, N.S.....	165
<i>"C" Unit.</i>		
Calderwood Hospital.....	Kingston, Ont.....	18
Sydenham Hospital.....	Kingston, Ont.....	150
Sir Sandford Fleming Hospital.....	Ottawa, Ont.....	60
<i>"D" Unit.</i>		
Euclid Hall Hospital.....	Toronto, Ont.....	36
Davisville Hospital.....	Toronto, Ont.....	425
Spadina Hospital.....	Toronto, Ont.....	69
College Street Hospital.....	Toronto, Ont.....	125
Brant House.....	Burlington, Ont.....	400
Hamilton Hut Hospital.....	Hamilton, Ont.....	20
<i>"F" Unit.</i>		
Speedwell Hospital.....	Guelph, Ont.....	295
Erie Hospital.....	London, Ont.....	67
<i>"G" Unit.</i>		
Deer Lodge Hospital.....	Winnipeg, Man.....	66
<i>"H" Unit.</i>		
Earl Grey Hospital.....	Regina, Sask.....	64
<i>"I" Unit.</i>		
Strathcona Hospital.....	Strathcona, Alta.....	148
Sunnyside Hospital.....	Calgary, Alta.....	42
Colonel Belcher Hospital.....	Calgary, Alta.....	150
South Edmonton Hospital.....	Edmonton, Alta.....	123
<i>"J" Unit.</i>		
Victoria Hospital.....	Victoria, B.C.....	110
Fairmont Hospital.....	Vancouver, B.C.....	150
Esquimalt Hospital.....	Vancouver, B.C.....	156
<i>"K" Unit.</i>		
Lancaster Hospital.....	St. John, N.B.....	55
Fredericton Hospital.....	Fredericton, N.B.....	100



INFIRMARY BUILDING AT THE NOVA SCOTIA SANATORIUM, KENTVILLE, DESIGNED BY THE ENGINEERING BRANCH,
DEPARTMENT OF SOLDIERS' CIVIL RE-ESTABLISHMENT.

SANATORIA FOR THE TUBERCULAR

Name	Place	Total No. of Patient Beds
"A" Unit—Laurentian Sanatorium and Laurentide Inn.....	Ste. Agathe des Monts, P.Q.....	266
Lake Edward Sanatorium.....	Lake Edward, P.Q.....	60
Belmont Hospital.....	Montreal, P.Q.....	50
"B" Unit—Dalton Sanatorium.....	North Wiltshire, P.E.I.....	75
"C" Unit—Sir Oliver Mowat Memorial Sanatorium.....	Kingston, Ont.....	173
"F" Unit—Speedwell Hospital (T.B.).....	Guelph, Ont.....	166
Freeport Sanatorium.....	Freeport, Ont.....	62
"I" Unit—Frank Sanatorium.....	Frank, Alta.....	60
Wetaskiwin Sanatorium.....	Wetaskiwin, Alta.....	40
"J" Unit—Balfour Sanatorium.....	Balfour, B.C.....	97
"K" Unit—Jordan Memorial Sanatorium.....	River Glade, N.B.....	78

MENTAL HOSPITALS

Newmarket Hospital.....	Newmarket, Ont.....	163
Westminster Hospital.....	London, Ont.....	430

INSTITUTIONS, OTHER THAN THOSE OF THE DEPARTMENT OF SOLDIERS' CIVIL RE-ESTABLISHMENT, WHERE DEPARTMENT HAS DEFINITE ARRANGEMENTS FOR ACCOMMODATION

Name	Place	No. of Beds
"A" Unit—Montreal General Hospital.....	Montreal, P.Q.....	...
Royal Victoria Hospital.....	Montreal, P.Q.....	150
Jeffrey Hale Hospital.....	Quebec, P.Q.....	30
"C" Unit—Hotel Dieu Hospital.....	Kingston, Ont.....	10
St. Luke's Hospital.....	Ottawa, Ont.....	15
Protestant General Hospital.....	Ottawa, Ont.....	24
Mount Hamilton Hospital.....	Hamilton, Ont.....	25
"D" Unit—Toronto General Hospital.....	Toronto, Ont.....	14
"F" Unit—Guelph General Hospital.....	Guelph, Ont.....	35
Victoria Hospital.....	London, Ont.....	...
Hotel Dieu Hospital.....	Windsor, Ont.....	30
"G" Unit—Winnipeg General Hospital.....	Winnipeg, Man.....	75
I.O.D.E. Hospital.....	Winnipeg, Man.....	66
St. Boniface Hospital.....	Winnipeg, Man.....	...
"H" Unit—St. Paul's Hospital.....	Saskatoon, Sask.....	15
Saskatoon City Hospital.....	Saskatoon, Sask.....	10
Grey Nuns' Hospital.....	Regina, Sask.....	15
"I" Unit—Calgary General Hospital.....	Calgary, Alta.....	75
Galt Hospital.....	Lethbridge, Alta.....	12
"J" Unit—Royal Inland Hospital.....	Kamloops, B.C.....	40
General Hospital.....	Vancouver, B.C.....	280
Jubilee Hospital.....	Victoria, B.C.....	...
Kootenay Lake Hospital.....	Kootenay Lake, B.C.....	...

INSTITUTIONS, OTHER THAN THOSE OF THE DEPARTMENT OF SOLDIERS' CIVIL RE-ESTABLISHMENT—*Continued*

SANATORIA		
Name	Place	No. of Beds
Nova Scotia Sanatorium.....	Kentville, N.S.....	304
Lady Grey Sanatorium.....	Ottawa, Ont.....	7
Mountain Sanatorium.....	Hamilton, Ont.....	144
Muskoka Cottage Sanatorium.....	Gravenhurst, Ont.....	25
Calydor Sanatorium.....	Gravenhurst, Ont.....	25
Queen Alexandra Sanatorium.....	Byron, Ont.....	223
Manitoba Provincial Sanatorium.....	Ninette, Man.....	175
King Edward Sanatorium.....	Winnipeg, Man.....	10
Saskatchewan Provincial Sanatorium.....	Fort Qu'Appelle, Sask.....	160
Mount View Sanatorium.....	Calgary, Alta.....	18
Tranquille Sanatorium.....	Tranquille, B.C.....	160
St. John County Hospital.....	East St. John, N.B.....	49

INSTITUTIONS FOR THE INSANE

Nova Scotia Hospital.....	Dartmouth, N.S.....	49
New Brunswick Hospital.....	Fairville, N.B.....	21
Beauport Hospital.....	Beauport, P.Q.....	19
St. Jean de Dieu Hospital.....	Montreal, P.Q.....	53
Protestant Hospital.....	Verdun, P.Q.....	24
Eastern Hospital.....	Brockville, Ont.....	12
Rockwood Hospital.....	Kingston, Ont.....	36
Toronto Hospital for Insane.....	Toronto, Ont.....	7
Hamilton Hospital for Insane.....	Hamilton, Ont.....	25
Mimico Hospital.....	Mimico, Ont.....	7
Hospital for Feeble-minded.....	Orillia, Ont.....	1
London Hospital for Insane.....	London, Ont.....	17
Homewood Sanatorium.....	Guelph, Ont.....	3
Ontario Military Hospital.....	Cobourg, Ont.....	64
Whitby Hospital.....	Whitby, Ont.....	2
Selkirk Asylum.....	Selkirk, Man.....	62
Brandon Hospital.....	Brandon, Man.....	None at present
Provincial Hospital, Battleford.....	Battleford, Sask.....	56
Ponoka Hospital.....	Ponoka, Alta.....	14
Red Deer Hospital.....	Red Deer, Alta.....	28
New Westminster Hospital.....	New Westminster, B.C.....	7
Essondale Hospital.....	Vancouver, B.C.....	77
Provincial Hospital.....	St. John, N.B.....	15

LIST OF UNIT MEDICAL DIRECTORS AND THEIR ADDRESSES

Unit	M.D.	Location of Headquarters	Unit Medical Director
"A".....	4	Montreal, P.Q.....	Dr. A. E. London
"B".....	5	Halifax, N.S.....	Dr. J. Hayes
"C".....	3	Kingston, Ont.....	Dr. E. E. Latta
"D".....	2	Toronto, Ont.....	Dr. J. M. Nettleton
"F".....	1	London, Ont.....	Dr. N. B. Alexander
"G".....	10	Winnipeg, Man.....	Dr. N. K. McIvor
"H".....	12	Regina, Sask.....	Dr. F. Guest
"I".....	13	Calgary, Alta.....	Dr. G. R. Johnson
"J".....	11	Vancouver, B.C.....	Dr. A. P. Proctor
"K".....	7	Fredericton, N.B.....	Dr. Chas. MacKay
"L".....	11	Dawson City.....	Dr. W. W. Chipman

PATIENTS ON STRENGTH

The following figures show:—

Patients on strength September 13, 1919

Tuberculosis.....	1,848
Insane.....	764
General.....	4,894
Total.....	7,506

Included in the above are:—

Vocational students.....	382
Out-patients, Class 1.....	1,977

Number of Patients treated by Military Hospitals Commission between January 1, 1917, and March 31, 1918, 28,258.

Patients treated between April 1, 1918, and September 13, 1919.....	25,892
Number of treatments given to out-patients, class 2, during the week of September 13, 1919.....	9,119
The number of out-patient treatments given between May 1, 1919, and September 13, 1919.....	89,126
Average number of treatments now given per week (approximately).....	7,000
Patients given institutional treatment under P.C. 387 without pay and allowances, between March 1, 1919, and September 13, 1919.....	3,201

The percent. of ex-officer Patients as compared with former ranks is 5 per cent.

Number of Patients on strength October 31, 1918

Tuberculosis.....	1,254
Insane.....	393
General.....	1,480

Total..... 3,127

Included in the above are: Out-patients, 898.

ORTHOPÆDIC APPLIANCES

Report of the Orthopædic and Surgical Appliances Branch, dated August 31, 1919.

The Artificial Limb Factory under the Department has now furnished limbs and orthopædic appliances to over 90 per cent of the men in military hospitals or who are discharged, who require the same. The figures to the 31st August, 1919, show:—

New legs delivered.....	2,719
New arms delivered.....	1,332

Total artificial limbs furnished.....	4,051
New sockets delivered.....	1,226
New arm parts delivered.....	756
Peg legs.....	798
Boots made and delivered.....	4,149
Minor orthopædic appliances.....	10,731
Major repairs completed.....	5,094

Total minor orthopædic appliances, major repairs and sundries.....	22,754
--	--------

Total..... 26,805

NUMBER OF D.S.C.R. PATIENTS IN INSTITUTIONS FOR MENTAL DISEASES AS ON 10TH SEPTEMBER, 1919

	Number
Nova Scotia Hospital, Dartmouth.....	49
New Brunswick Hospital, Fairville.....	21
Beauport Hospital, P.Q.....	19

	Number
St. Jean de Dieu Hospital, P.Q.....	53
Protestant Hospital, Verdun, P.Q.....	24
Eastern Hospital, Brockville, Ont.....	12
Rockwood Hospital, Kingston, Ont.....	36
Toronto Hospital for Insane, Ont.....	7
Hamilton Hospital for Insane, Ont.....	25
Newmarket Hospital, Newmarket, Ont.....	182
Mimico Hospital, Ont.....	7
Hospital for Feeble-minded, Orillia, Ont.....	1
London Hospital for Insane, Ont.....	17
Homewood Sanatorium, Ont.....	3
Ontario Military Hospital, Cobourg, Ont.....	64
Whitby Hospital, Ont.....	2
Selkirk Asylum, Manitoba.....	62
Brandon Hospital, Man.....	0
Provincial Hospital, Battleford, Sask.....	56
Ponoka Hospital, Alta.....	14
Red Deer Hospital, Alta.....	28
New Westminster Hospital, B.C.....	7
Essondale Hospital, Vancouver, B.C.....	77
Falconwood Insane Asylum, P.E.I.....	3
St. John's Asylum.....	1
Total.....	770

LOCATION OF CLINICS

Unit	
A and E Units.....	Quebec Montreal
B Unit.....	Halifax
C ".....	Kingston Ottawa
D ".....	Toronto Hamilton
F ".....	London Windsor Guelph
G ".....	Winnipeg
H ".....	Regina Saskatoon
I ".....	Calgary
J ".....	Edmonton Vancouver
K ".....	Victoria Fredericton St. John

MEDICAL REPRESENTATIVES, OTHER THAN UNIT HEADQUARTERS, SUB-OFFICES AND INSTITUTION APPOINTMENTS

SUMMARY BY UNITS

Unit	No. of Medical Representatives
A and E.....	23
B.....	18
C.....	58
D.....	31
F.....	15
G.....	33
H.....	11
I.....	2
J.....	36
K.....	4
L.....	1

Grand total..... 232

Other places than where these representatives are located are covered by the appointees in D.S.C.R. offices and institutions.

Additional appointments are made from time to time as need becomes evident.



GROUP OF COTTAGES AT MOWAT SANATORIUM.



A COTTAGE "COLONY" AT A SANATORIUM.



BELOW KNEE AMPUTATION
(Willow Socket)



ABOVE KNEE AMPUTATION



BELOW-KNEE AMPUTATION
(Leather Slip Socket)



PEG LEG



FINISHED LIMBS READY FOR SHIPMENT TO OWNERS.

Orthopædic and Surgical Appliances Branch

By Major R. W. Coulthard, B.A.Sc.,
Director Orthopædic and Surgical Appliances Branch.

In June, 1916, the Military Hospitals Commission of Canada was confronted with the problem of the after-care of members and ex-members of the Canadian Expeditionary Force, who had suffered amputation or otherwise been disabled so as to call for the use of surgical appliances such as would satisfy each individual case. Negotiations were later commenced, and arrangements are now completed whereby disabled cases of the C.E.F., resident in England, and those of the B.E.F., resident in Canada, may have their requirements attended to on a repayment system by their respective Governments.

After having thoroughly investigated the question, and taken into consideration the conditions prevailing in Canada, it was determined that a Government-owned-and-operated establishment for the manufacture of artificial limbs and other surgical appliances would meet the situation.

There were no artificial-limb factories in Canada having the capacity sufficient to cover the abnormal needs occasioned by the war, and such as existed were located chiefly in the large industrial centres of the east. Further, no standard type of artificial limbs or other surgical appliances was universally available throughout the Dominion, and it was deemed an absolute necessity that standard types be adopted so that disabled soldiers, who eventually would be scattered far and wide over the country, would much more easily be able to obtain renewals and repairs.

Government proprietorship was further thought to be the best means of keeping in touch with and for adopting all the latest improvements in designs from other countries, as co-operation between Governments could be established. This co-operation afterwards became active, and at the present time there is an exchanging of ideas between this branch and the similar institutions of several of the Allied

Governments. Again, Government control seemed to offer the best means of initiating and carrying on experimental and research work on a scale such as would be productive of results, in keeping with the standardizing policy.

The Research Department, afterwards established, has done much valuable work in the many improvements and new ideas that have been brought to bear on artificial limbs, etc.

Limb fitters and surgical instrument makers were few in number in this country in the years previous to the war, but now there is employment for much of this class of labour owing to the sudden magnitude to which this industry has grown, and it was necessary to teach men to become skilled in this work. To assist in the policy of establishing returned men in trades, it was determined to train as many as possible in this work.

In August, 1916, therefore, the first Government Artificial Limb Shop was temporarily opened at No. 47 Buchanan Street, Toronto, with a floor space of approximately 600 square feet. It was equipped with: Lathe, Band Saw, Hack Saw, Grinder, Drill, Anvil, Emery Wheel, Blower and Brazing Outfit, Work Benches, Drying Room, 5 H.P. Motor. A practical limb maker and fitter was placed in charge of a staff consisting of six men and a boy. The staff was later increased to thirteen in all, and by the 21st April, 1917, after working for eight months, they had succeeded in supplying:

Double Amputation (both thighs).....	1
Right Leg (above knee).....	32
Right Leg (below knee).....	38
Left Leg (above knee).....	43
Left Leg (below knee).....	37
Right Arm (above elbow).....	16
Right Arm (below elbow).....	15
Left Arm (above elbow).....	20
Left Arm (below elbow).....	14
Total.....	216



TAKING PLASTER CAST OF STUMP.



LIMB FITTING AT THE TORONTO DEPOT.

Help was gradually being engaged, and a policy of placing returned men in the work-shop was formulated and adhered to wherever possible. The shop had been removed in February to more commodious premises at No. 426 Yonge Street.

With the ever-growing number of casualties, the work rapidly increased, and late in 1917 it was decided to build a large work-shop in the grounds of the Orthopædic Hospital at Davisville. A lease was also obtained of accommodation on the top floor of the S. C. R. Building, 185 Spadina Avenue, in December, 1917.

In July, 1918, the administrative work had grown to such an extent that the manager was unable to overtake the necessary correspondence, organization of records, and accounting, in addition to the general oversight of the factory, and, in consequence, a superintendent of the whole Branch was appointed. In September, 1918, the work was still increasing and the fifth floor of the S. C. R. Building was set aside as additional manufacturing space. In December of the same year the fourth floor was also taken, and the administrative staff, central stores and boot-making shop are now located there. At the present time the floor space occupied by the Branch in Toronto is 26,000 square feet. The Davisville fitting shop will be transferred to the grounds of the Dominion Orthopædic Hospital at Christie Street, where a new two-storied building has been erected with a floor area of 16,000 square feet. This fitting shop will handle all the hospital cases and discharged men in the Toronto area. The latter have hitherto been mostly served at No. 185 Spadina Avenue, and the new arrangement will allow the factory to be used for its proper function, i.e., production.

The following is a list of the more important machinery and plant in the factory:

1. *Machine Shop*.—Milling machine, 2 shaping machines, engine lathe, turret lathe and 2 "Pratt & Whitney" lathes, drilling and stamping machines, and band saw for slitting metal.
2. *Brazing and Welding Plant*.
3. *Nickel-Plating Plant*.
4. *Woodworking Shop*.—Pattern lathe, band

saws, boring machine, "Curtis" carving machine, and the usual drills and similar equipment.

5. *Shoe Shop*.—This is equipped with the "Landis" stitching and welting machines.

It has been the policy of the Department to provide labour-saving machinery wherever possible, and to conduct the factory on a production basis from a commercial point of view. The present organization of the Branch is as follows:

Administrative.—The Branch is controlled by a Director, who reports to the Deputy Minister direct. The executives are as follows:

Assistant to Director.

Chief Accountant, whose duties are to attend to pay-rolls, auditing, accounting for stores, and the supervision of the cost accounting system.

Designs Engineer, in charge of experimental research work and inspection.

The Production Staff is controlled by the *Production Engineer*, who has, as his assistants, the various factory foremen.

For the distribution of artificial legs to the depots throughout the Dominion, the factory manufactures set-ups, which are stock sizes of shins, knee-blocks, and feet, partly assembled. To these the fitter at the depot attaches the bucket which he has shaped from the willow block to the stump of the individual amputation case, and all that remains is to complete the assembly and finish.

Stock surgical splints, other appliances, and spare parts are manufactured at Toronto and distributed to the depots. In this way production stands on a good manufacturing basis, as it is the result of the operations of one large central plant.

Each department of the factory is in charge of a highly-skilled foreman, and the great majority of the men under his charge are returned soldiers, many of whom were taught the trade in the factory school at Davisville. Students of this school were mostly men who had already skill in one or more of the allied trades, and were given instruction to enable them to be efficient in the work of the factory.



ARM, HAND, AND FOOT ASSEMBLING DEPARTMENT



LIMB-FITTING DEPARTMENT.

The following categorical analysis of the entire male staff employed by the O. and S. A. Branch in Canada shows:—

	Per Cent.
Ex-members of the C.E.F.	80
Ex-members of the C.E.F. who saw service in some theatre of war . .	66
Exempted, for over age and under age	14.6
Civilians, other than above	5.4

RESEARCH DEPARTMENT

The work of this department, in charge of the Designs Engineer, serves three purposes: Research, designs, inspection.

Research.—This branch takes charge of all experimental work, developing and testing practical ideas, devised or submitted, and endeavours to improve existing types of appliances from a mechanical standpoint. To ensure first-class work this department is fitted with most accurate and up-to-date machinery, and to this end highly skilled mechanics are employed. When a new model is constructed it is tested on a patient who is generally an instructor or employee, so that improvements or alterations considered necessary, according to the test, may be made.

Designs.—The approved model is drafted out in detail and specifications drawn up before being turned over to the factory for production. In addition, the depots are kept supplied with blue-prints and specifications of every standard article.

Inspection.—All parts manufactured are inspected during process; also all material, on being received from the vendors. The completed assembly is inspected before the appliance is passed to the surgeon for approval and issue to the patient. The following are a few of the appliances which have been invented or improved by the Research Department: Canada arm, differential arm, Government hook (large and small), adjustable drop foot splint, standardization of knee joint, double amputation wrist connection, development of felt feet, hands, and other essential improvements to appliances in general.

The Branch has Orthopædic Fitting Depots in the following centres, where renewals of and repairs to appliances are carried out: Halifax, Fredericton, Montreal, Ottawa, Kingston, Hamilton, Winnipeg, Regina, Calgary, Edmonton, Vancouver, Victoria. And a depot will soon be opened up at London, Ont.

As a result of experiments, and after a thorough canvass of the best practices available, it was decided in July, 1918, that the proper course was to manufacture Set-ups (i.e., the limb in the rough) wholesale, in stock lengths, leaving the making of the buckets (i.e., the sockets into which the patient's stump is fitted) until the patient presents himself. This method has been proved entirely practical. It does not in any way interfere with the individual attention necessary, since, as above stated, the hollowing out and fitting of the bucket for each patient is an individual process. By the adoption of this system, a considerable saving in time is effected, thus increasing production and allowing the fitter more time to spend in fitting the bucket, since he loses no time in making the rest of the limb. The actual attendance period of the patient in the fitting shop is shortened, and his patience, therefore, is less likely to become exhausted. No appliance is considered completed until the surgeon has pronounced it satisfactory. It is generally conceded that the appliances turned out by the Branch are equal to, if not superior to, those made in any allied country.

Wholesale production of the Set-ups also permits the stocking of depots throughout the Dominion, and obviates the necessity of installing in them elaborate and costly machinery, which would otherwise be necessary to fashion limbs for local cases.

All patients are fitted with their first limbs in Toronto, the reason being that Toronto is the Canadian Army Medical Corps Orthopædic centre where the Dominion Orthopædic Hospital is situated. Those amputation cases whose homes are in the Eastern provinces are sent direct to Eastern demobilization centres—at least in the first instance—and thereafter called in to Toronto by the Canadian Army Medical Corps. Men in the Western provinces are sent directly to Toronto from the port of disembarka-



ROUGHING OUT SET-UPS.



QUADRUPPLICATE HAND AND FOOT SHAPING MACHINE.
(See Model in Centre.)

tion and are fitted with their first limbs before they proceed to their western demobilization centres.

The type of appliance supplied has been decided upon in conference with the orthopædic consultants of the Canadian Army Medical Corps. The best of material is used in the manufacture, and it may be stated that the patients expect and receive a well finished article.

It must not be forgotten that amputation cases have a psychology of their own. As a class, they are most cheerful, and the ordinary observer is, therefore, liable to be misled when considering the difficulties of fitting them to their satisfaction. Many amputation cases seem to be under the impression that when fitted with an artificial leg they will be able to walk away, take off the limb at night and put it on in the morning, just as if it were a coat. When it is found that the flabby stump must be hardened and strengthened and that they must go through, not only discomfort, but even pain, before they can become fair walkers, they often become discouraged, irritable and critical. It is at this time that the experienced fitter, with a knowledge of his trade and a sympathetic interest in the patient, can often put matters right, and it is unfortunately true that any lack of sympathy and personality renders first-class workmen of little use for soldier patients. In the light of this knowledge, and also with the object of providing amputation cases with a remunerative trade, a class of instruction for returned soldiers (giving amputation cases preference) in limb making and fitting was opened by the Branch in 1918, and already several men have graduated, and have been placed in either the factory or Branch depots.

In this class, the students are given lectures and talks on theory, followed by practice in wood, metal, and leather working. Only those men who already have a knowledge of one or other of these trades are admitted, and a practical limb maker and fitter, and a returned soldier (himself an amputation case, who has had experience in management), are in charge of the work. The students are encouraged to take an interest in their work by the prospect of a

permanent remunerative position should they qualify successfully.

There is room for improvement in all devices, and this applies to artificial limbs, and more especially to arms. This difficulty, however, is common to all countries, and no really practical appliance has yet been devised to replace the natural arm. The elaborate mechanical arms are heavy, and easily get out of order. The willow wood dress arm with artificial hand is of little use to the manual worker. For such men the most satisfactory appliance is what is known as the "bras de travail," or working arm, which is a simple bucket fitted with a hook, with or without a metal tube extension. Various types of hooks are supplied, some of which are capable of holding a tool very rigidly or with a swinging motion. Some are of the spring split hook variety, the jaw being controlled by means of harness over the other shoulder. The energies of the Research Department are at present concentrated on the invention of improved patterns of hooks.

At the present time the organization of classes to instruct the amputation case in the most correct method of using artificial limbs, specially to teach the practical uses to which an artificial arm can be put, and to show the limitations, is going forward.

By this means it is expected, *first*, to increase the efficiency of those who have lost a limb; *secondly*, by the opportunity thus afforded to observe the practicality of the various devices, and by rejection and improvement, where found necessary, to increase the value of the appliances themselves; *thirdly*, by the same observation to see that the men are in possession of the appliances most suitable to their requirements.

Besides the manufacture of artificial limbs and their component parts, many surgical appliances are made, such as splints, braces, belts, corsets and orthopædic boots. The work of the Branch is being extended continually.

Central Stores, S. C. R. Building, Toronto, carry full supplies of all the raw material required in the factory, also tools and component parts. Minor appliances and parts made in the factory are stocked for issue to fitting depots on requisition. In order that ex-soldiers may not suffer



RAWHIDING DEPARTMENT.



ENAMELLING AND FINISHING

financial loss whilst their appliances are being renewed or repaired, an allowance sufficient to compensate them is granted under Order-in-Council whenever such renewals, etc., necessitate their absence from employment.

The Director of Medical Services of the Department has appointed an orthopaedic consultant, whose duty it is to educate medical officers engaged in the Department's work throughout Canada in the best form of standard appliances for specific disabilities, and to advise as to any improvements (from a surgical point of view) which might be made in the design. He further supervises all local prescriptions for appliances, and comes in contact with each case.

Finally, it may be repeated that each case is

given the closest individual attention, and that every endeavour is being made to see that reasonable complaints are attended to, and the cause removed.

The table below shows the number of men recorded at Toronto as having been served by the Branch to date, together with a general classification of their disabilities and distribution according to home address. It will be noted that a very large percentage are registered under Central Ontario, and it is probable that the distribution will be considerably adjusted as time goes on. These figures comprise cases referred to the Department for artificial limbs and appliances by the Canadian Army Medical Corps.

ARM AMPUTATIONS	N.S. & P.E.I.	N.B.	P.Q.	E. Ont.	C. Ont.	W. Ont.	Man.	Sask.	Alta.	B.C.	Dominion Total
Right above Elbow.....	10	5	12	5	101	1	22	13	11	17	197
Right below Elbow.....	5	3	9	3	55	..	38	6	14	6	139
Total Right Arms.....	15	8	21	8	156	1	60	19	25	23	336
Left above Elbow.....	7	7	19	2	92	3	25	14	13	14	196
Left below Elbow.....	3	1	10	8	85	..	18	14	7	11	157
Total Left Arms.....	10	8	29	10	177	3	43	28	20	25	353
Total Arm Amputations....	25	16	50	18	333	4	103	47	45	48	689

LEG AMPUTATIONS	N.S. & P.E.I.	N.B.	P.Q.	E. Ont.	C. Ont.	W. Ont.	Man.	Sask.	Alta.	B.C.	Dominion Total
Right above Knee.....	24	18	40	13	310	5	53	27	34	24	548
Right below Knee.....	13	5	38	9	127	6	39	13	29	15	294
Total Right Legs.....	37	23	78	22	437	11	92	40	63	39	842
Left below Knee.....	15	7	29	5	192	4	37	16	26	22	353
Left above Knee.....	25	14	56	17	302	4	55	43	32	41	589
Total Left Legs.....	40	21	85	22	494	8	92	59	58	63	942
Total Leg Amputations....	77	44	163	44	931	19	184	99	121	102	1784
Grand Total Amputations...	102	60	213	62	1264	23	287	146	166	150	2473



LEATHER WORKING DEPARTMENT FOR ARMS AND SPLINTS.



PORTION OF MACHINE SHOP.



LEG ASSEMBLING DEPARTMENT.



PORTION OF ORTHOPAEDIC BOOT SHOP.



FITTING ARM APPLIANCE.



FITTING ARM APPLIANCE.

	N.S. & P.E.I.	N.B.	P.Q.	E. Ont.	C. Ont.	W. Ont.	Man.	Sask.	Alta.	B.C.	Dominion Total
ARMS:											
Above Elbow.....	17	12	31	7	193	4	47	27	24	31	393
Below Elbow.....	8	4	19	11	140	..	56	20	21	17	296
LEGS:											
Above Knee.....	49	32	96	30	612	9	108	70	66	65	1137
Below Knee.....	28	12	67	14	319	10	76	29	55	37	647

MINOR APPLIANCES CASES

	N.S. & P.E.I.	N.B.	P.Q.	E. Ont.	C. Ont.	W. Ont.	Man.	Sask.	Alta.	B.C.	Dominion Total
Orthopædic Boots.....	91	42	117	48	1291	28	104	79	165	362	2327
Foot Plates and Arches.....	4	3	12	23	348	4	98	8	12	58	570
Splints and Braces.....	22	15	55	37	439	13	83	22	49	49	784
Belts and Corsets.....	2	..	16	14	61	7	17	6	27	23	173
Trusses and Suspensories.....	1	2	4	8	103	4	13	6	9	31	181
Elastic and Rubber Goods.....	3	6	6	5	171	5	35	7	27	47	312
Artificial Eyes.....	4	1	8	3	37	3	18	4	6	20	104
Glasses.....	4	4	101	32	316	17	69	9	92	313	957
Total.....	131	73	319	170	2766	81	437	141	387	903	5408
Grand Total, All Patients...	233	133	532	232	4030	104	724	287	553	1053	7881



INTERIOR OF CARPENTRY SHOP (MONTREAL).



CLASS IN ELECTRICAL WORK.

Vocational Training

By W. E. Segsworth, M.E., Director of Vocational Training 1917 to January, 1919,
in collaboration with

N. F. Parkinson, M.A.Sc., Director of Vocational Training, January, 1919.

The industrial rehabilitation of soldiers who have been disabled in the war has aroused a great deal of interest among labour unions, employers, sociologists, educationalists, and the public at large in all the belligerent countries.

In former wars the disabled soldier was given a pension often far too small, and was then discharged to eke out a living as best he could without any further assistance from the Government. The present war has, however, awakened a keen sense of public duty toward those who have so bravely defended their country, with the result that provision has been made in every country for the re-training of those disabled in the war.

SCOPE OF THE WORK

The problem of bringing men who are thus disabled back to their full earning power in civil life can be divided into two parts—medical and industrial. The medical part is taken care of by the Canadian Army Medical Corps and the Medical Branch of the Department of Soldiers' Civil Re-Establishment.

The Vocational Branch is concerned directly

with all those agencies necessary to bring the handicapped soldier back to civil life from an industrial standpoint.

RE-TRAINING POLICY

In re-training disabled soldiers, most of whom by the way are unskilled men without definite occupations, or of the less highly skilled occupations, two policies are open to the Government.

1. To take all these men and train them in highly skilled trades, such as carpenters, printers, plumbers, machinists, etc., which, if they have no skill to build upon, would take from one to three years, or possibly more.

2. (a) If they are skilled in some occupation, to build on that foundation by training them in some lighter occupation closely allied to it where their former experience may be made use of; or

(b) If they have no former skill to build upon, to train them in some occupation (not piece work) in which they will be able to earn the full going wage. This can be accomplished in an average of from 6 to 8 months.

The second method has been adopted as a



RE-TRAINING CLASS. THIS MAN, OWING TO THE LOSS OF AN ARM, WAS UNABLE TO RETURN TO HIS FORMER OCCUPATION AND IS NOW TAKING A COMMERCIAL COURSE, SPECIALIZING IN BOOK-KEEPING AND THE USE OF THE ADDING MACHINE.



RE-TRAINING IN INDUSTRY. DISABLED SOLDIERS BEING INSTRUCTED IN THE FACTORY OF AN ADDING MACHINE COMPANY IN THE OPERATION AND REPAIR OF THE ADDING MACHINE MANUFACTURED BY THEM.

general principle in all allied and enemy countries, and also in Canada. While we speak of training a disabled man for a new occupation, this should not be misunderstood. It is definitely part of the policy of the Department, in every case of disablement, to train a man in an occupation as closely allied to his former one as possible. If a man has been a printer and has an amputation of the leg, he should be trained to operate a linotype or monotype machine. If he has been a house carpenter and is so weakened that he cannot climb over a building, he should be taught cabinet making. If he was a high-tension wireman and cannot carry on, he should be given some of the lighter lines of electrical work. A disabled railroad brakeman should become a telegrapher, train despatcher or something on the railroad, thus carrying on in his own environment. However, for the disabled unskilled labourer, some occupation should be selected in which he can earn the full going wage in the locality in which he resides. The illiterate mine labourer, if he has mechanical aptitude, should be taught to run concentrating tables or stamp mill. The unskilled labourer may be taught shoe repairing or some such occupation, and the unskilled European who has fought in our armies may be taught some occupation suited to his nationality. For instance, Finns and Italians take kindly to tailoring.

DIVERSITY OF OCCUPATIONS TAUGHT

It is a definite principle of the Department to train the whole number of disabled men in as many occupations as possible instead of in a few, so that competition between the men themselves and others in these occupations will be as small as possible. The number of different occupations in which men have been or are being trained by the Department is 314.

Those who receive this training are in age all the way from youths to men of 50 years. In education, from the illiterate to the university student. Industrially, anywhere between the limits of the lowest-grade railway labourer and the highly skilled mechanic. While a large number are single, fully half the men taking training are married and have children or have dependents as well as other responsibilities. In industrial experience they range from the boy who has never worked for wages, to the mechanic, artisan, clerk and professional man, who has been engaged in industrial life 15 or 20 years.

With the policy herein stated in view, and in consideration of the new factors introduced, a system of re-training has had to be built up to meet these new conditions which is totally unlike any training or educational system heretofore in operation.

HISTORY AND GROWTH

Before the present war attempts had been



RE-TRAINING IN INDUSTRY. THIS MAN IS SHOWN AS BEING TRAINED IN THE LIGHTER BRANCHES OF CARPENTRY WITH A PRIVATE FIRM.



RE-TRAINING CLASS. A PORTION OF THE MOTOR MECHANICS CLASS, WHERE VERY THOROUGH INSTRUCTION IS GIVEN IN BOTH THEORY AND PRACTICAL WORK.

made in several places to train the crippled soldier and the industrially handicapped.

In the early months of its existence the attention of the Military Hospitals' Commission was directed to the problem of the training of disabled soldiers, both from its own experience and hearing of the work in other countries.

Sir James Lougheed, P.C., K.C.M.G., the President of the Commission at that time, determined to have a centrally directed system so that the benefits of vocational training could be extended to all soldiers entitled to the same, no matter where they resided in Canada. The Government accepted this policy, regarding itself as responsible for this problem, and determined to shoulder that responsibility and carry it through.

In March, 1916, a representative of the Commission visited the various Provinces of Canada and made arrangements to secure the co-operation of the Provinces. It was arranged that in each province a voluntary committee would be appointed, on which there would be representatives of education, labour, agriculture, manufacture, and others who were interested and could bring specialized knowledge to bear on the training of these disabled soldiers. It was also arranged with the various Provincial educational departments that they should loan to the Dominion Government men to undertake this work.

In the Province of Ontario it was arranged that the Military Hospitals' Commission should select the men for training and designate in what subjects they were to be trained, and that the Ontario Soldiers' Aid Commission should undertake the training as agents for and at the expense of the Dominion Government.

In the spring of 1916, work was started in a number of hospitals throughout Canada. At the commencement of the work in the hospitals, classes in general subjects were established, in which those who desired to do so might brush up their education before taking up new subjects. One of the earliest classes put on was teaching English to foreign-born members of the Canadian Expeditionary Force, of whom a number had been returned. More from a recreative than an educational point of view, instruction in simple work of arts and crafts was introduced.

It was soon found, however, that while a few men could be sufficiently trained before discharge to become proficient in some occupation, a large number were being discharged before their training was complete. In order to take care of these men it became necessary to continue their training after discharge, and some authority had to be granted for their support during this period. On the 29th of June, 1916,



RE-TRAINING IN INDUSTRY. MECHANICAL DRAUGHTING CLASS. IN THIS CLASS ARE THE FOLLOWING WHO, FOR REASONS STATED, ARE UNABLE TO RETURN TO THEIR PREVIOUS OCCUPATIONS: A MACHINIST, SUFFERING FROM HEART DISEASE, A CHAUFFEUR, STATIONARY ENGINEER, MACHINIST AND APPRENTICED MECHANIC WITH SEVERE GUNSHOT WOUNDS.



RE-TRAINING IN INDUSTRY. BEFORE THE WAR THIS MAN WAS A BRASS FURNACE MAN, BUT OWING TO WOUNDS HE WAS UNABLE TO RETURN TO THIS WORK. HE IS NOW BEING RE-TRAINED IN A RAILWAY SHOP AS A MACHINE OPERATOR.

an Order-in-Council (No. 1472) was passed, fixing a scale of pay and allowances, and giving the Military Hospitals' Commission authority to train after discharge men who were so disabled by war service that they could not follow their previous occupation. The practical development of the system of industrial re-training dates from the passing of this Order-in-Council.

Up to July, 1917, 39 occupations were being taught, but it was found that 42% of the men selected three, viz., Commercial, Civil Service, and Motor Mechanics, thus leading to overcrowding and the competition of disabled men, not only with other disabled men but with those already in these occupations.

Experience in technical schools had shown that there were only a small number of occupations in which a man could be successfully

trained in a school, therefore the obvious solution of the difficulty was to train the men in industry. Another reason for this policy was that the cost of equipment and buildings for training men in occupations in schools was very high and the transition from training to wage earning was easier if the men were trained in the industry itself rather than in the school.

TRAINING IN INDUSTRIES—W. E. SEGSWORTH, M.E.

In July, 1917, Mr. W. E. Segsworth, M.E., of Toronto, became Director of Vocational Training. He at once put into effect the system of training men in industries, and thus brought the work into closer touch with labour and employers, and gave a more practical trend to the whole policy. The result of this change in policy has been that at the present time the Department is training, or has trained, men in 314 different occupations.

RAPID DEVELOPMENT OF RE-TRAINING—1917

During the year 1916 the work of the Vocational Branch received so little encouragement from either the public or the men that the increase in the number of students was small, but the rate of increase was accelerated to a marked degree during the first half of 1917, and in the latter part of the year, owing to publicity among the soldiers and the public.

SELECTION OF STAFF—VOCATIONAL BRANCH

The question of staff had become a pressing one. Up to that time both the executive and teaching staff had been drawn from men who had previous training in educational work. It was felt that in order to bring the work more closely in touch with the labour and manufacturing interests, and put it on a practical basis, the executive staff at least should be composed in some part of men who had had previous experience in industry and trades, who understood the point of view of both the labour organizations and the employers. With regard to this, it was felt that soldiers who had been craftsmen, if properly selected, would make

better instructors for other returned men than men who had spent their life in teaching. This policy was immediately put into force and has been adhered to ever since, and among the male members of the staff the percentage of men who have seen service in the C.E.F. has risen from 37% at the end of 1917, to 97% on November 1, 1918. At this date the total male staff of the Vocational Branch numbered 1686, including instructors and messenger boys.

Of this number—

1216	had	seen	service	in	France
170	"	"	"	"	England
96	"	"	"	"	Canada

while

154 were over age or under age
50 had been exempted.

Excluding the over age or under age, therefore, 80% of the male staff were on active service in France, while 97% saw service in the C.E.F.

FOLLOW-UP SYSTEM—VOCATIONAL BRANCH

At the beginning, the instructor in charge of the work in the hospitals was assigned the duty of interviewing soldiers to see whether they needed re-training or were entitled to its benefits. There was no compulsory system of interviewing. A large number of men were discharged and passed into civil life who could not compete with their fellow workmen, and these men kept constantly returning to the Department for training. Those who needed training, and did not return, spread dissatisfaction throughout the country. It was therefore decided, in the fall of 1917, that all men passing through the invalided section of the army must be interviewed before discharge. At this time the Vocational Branch began to go through all the back files and write to all invalided soldiers who had been discharged without an interview, in order to call their attention to the advantages of vocational training.

At the beginning of 1918, the Department introduced and organized the follow-up and after-care section. Its duty was to receive notification a month before a man was about to graduate and see that a position was waiting for him; to

place him in this position, and then to see that it was suited to him and that he was making a success of his work there. It was also its duty to obtain and keep statistics as to the work graduates were doing, the wages they were receiving, and their relations with their employers, fellow workmen and the trades unions, if they were engaged in a unionized occupation.

As the work continued, it was found that a small number of men were falling ill, not only from a recurrence of their disability, but from minor complaints; therefore a regulation was put into force that all men receiving training should get free medical treatment during their course of training.

A new section for the training and after-care of blinded soldiers was created in August, 1918, under the care of Capt. E. A. Baker, M.C.,



RE-TRAINING IN INDUSTRY. THIS MAN IS BEING TRAINED AS A WATCHMAKER WITH A WELL-KNOWN WATCH AND JEWELLERY MANUFACTURER.



RE TRAINING IN INDUSTRY. LEARNING TO BECOME PIANO TUNERS. TRAINING IS BEING GIVEN BY A FIRM MANUFACTURING PIANOS ON A LARGE SCALE.

Croix de Guerre, who is himself blind on account of war service. This is distinct from other branches of training.

ALLOWANCES TO THOSE UNDERGOING TRAINING INCREASED TO MEET INCREASED COST OF LIVING

Shortly after the Department was created it was decided that the pay and allowances which were in existence up to that time were hardly adequate to meet living expenses, which had been increasing for some time. A new Order-in-Council, P.C. 1366, was passed on 22nd June, 1918, providing a new scale of pay and allowances effective until 1st March, 1919, when an increased rate went into effect.

At the beginning of 1918 there were 133 graduates; at the end of 1918, 2,285 students had completed their courses. At the beginning of 1918 there were 954 re-training students; and on the 31st December, 1918, the number had increased to 3,189, notwithstanding the number who had graduated in the meantime.

On November 1st, 1919, when demobilization of the C.E.F. had been practically completed, the number of graduates had increased to 7,577, while the number in training at that date was 19,125, made up of 5,136 minors and 13,989 disabled men being re-trained.

PRESENT ORGANIZATION—VOCATIONAL BRANCH

At the present the work of the Vocational Branch is divided into three parts: (1) Ward Occupations, (2) Curative Workshops, (3) Industrial Re-training.

A far-reaching decision was arrived at by the Government in February, 1918, which has since worked out to the advantage of all, that in the hospitals controlled by the Department of Militia and Defence, occupational therapy should be administered by the Vocational Branch of the Department of Soldiers' Civil Re-Establishment, this Department supplying and controlling the equipment and personnel, but the work to be directed by the Army Medical Corps of the Department of Militia and Defence.

Ward occupations are taught and administered in practically every hospital in Canada by women in distinctive uniform on the staff of the Department. As the work is curative, it is entirely under the direction of the Officer Commanding the hospital, and his doctors.

Curative workshops are attached to practically every hospital treating ex-members of the Forces throughout Canada. The work conducted in these shops is for those patients who are convalescing and can leave the wards. While the primary object of these workshops is curative, a number of the men attain a certain skill in the various occupations which they study, which



RE TRAINING IN INDUSTRY. THESE MEN BEING TRAINED AS COMMERCIAL TELEGRAPHERS IN THE OFFICE OF A LARGE COMMERCIAL TELEGRAPH COMPANY.



RE-TRAINING IN INDUSTRY. THIS MAN IS BEING TRAINED AS A CABINETMAKER IN A RAILWAY SHOP.

skill is of use to them in after life, but there is no definite attempt made here to finish their training in any of these occupations completely.

The organization of the Vocational Branch is as follows:—In Ottawa there is a central administrative office presided over by a Director of Vocational Training with his staff. In each Province, with the exception of Prince Edward Island (which is attached to Nova Scotia), the Director of Vocational Training has a representative known as the District Vocational Officer, who administers all the work in his territory.

The principle has been adopted of giving the District Vocational Officer as much freedom of action as is consistent with the administration of a Government Department, and holding him responsible for results. Certain parts of the work, however, are centralized in Ottawa, such as the final approval of courses, renting and purchase of buildings, the purchase of equipment and materials, the approval of pay and allowances, statistics, and those things in general which are matters of Government policy.

The administration in the Units may be divided into the following sections:—Interviewing and Boarding for Courses, Industrial Surveys, Pay and Allowances, Medical Advice and Social Service, Training, Inspection, Follow up and After-care, Employment.

INTERVIEWING AND BOARDING FOR COURSES

If it is considered that a man cannot return to his previous occupation, due to his war in-

juries, and the man himself, the interviewer, and the Vocational Medical Advisor have tentatively made up their minds as to the proper occupation for him to learn, he is brought before a Disabled Soldiers' Training Board. This Board is composed of the District Vocational Officer or his representative in the person of the interviewer, the Vocational Medical Advisor, and from one to three or four members drawn from the district advisory committee. As far as possible, the Department endeavours to have on the Disabled Soldiers' Training Board a member of the advisory committee who is familiar with the trade or occupation into which the man is about to enter. The Disabled Soldiers' Training Board talks over confidentially and intimately with the man the work he intends to undertake, its recommendation is sent to Ottawa, and either concurred in or rejected.

If the man is to be given a course of training in an industrial establishment, the interviewer usually arranges that he and the handicapped soldier confer with the employer who is going to train him, before the recommendation is sent to Ottawa, so that the advice of the latter may be taken. The interviewers are practically all returned soldiers selected from men who before the war had industrial experience.



WARD OCCUPATIONS. PATIENT WHO COULD BE INTERESTED IN THE BUILDING OF AEROPLANE MODELS, BUT IN NOTHING ELSE. MATERIAL AND PLANS WERE SUPPLIED, AND HE HAS BUILT SEVERAL AEROPLANE MODELS DURING HIS CONVALESCENCE, WITH MARKED BENEFICIAL RESULTS.



WARD OCCUPATIONS. FOUR PATIENTS DOING BASKET WORK, ONE OF THE MOST POPULAR OF WARD OCCUPATIONS.

VOCATIONAL MEDICAL ADVISORS

The medical advisors in the districts are detailed to the local office by the local Unit Medical Director. They furnish the District Vocational Officer with medical advice as to whether the man's disability was received on or aggravated by service; as to whether he can return to his former occupation; whether he is medically fitted for the new occupation selected by him; and after he has started his course, as to his continued suitability for the occupation he is learning. They also inspect men reporting sick during training, and if necessary, send them to the Unit Medical Director for treatment, and undertake researches regarding the medical aspect of industrial re-training.

INSPECTORS

As a great many men are being trained in industry, it is necessary to carry out an inspection every week and to secure a confidential report, for the following reasons: To prevent exploitation of labour, to see that the men are actually receiving the training necessary to bring them to a state of efficiency, to see that their health is not breaking down, to see that the relations of the men with their employers and fellow workmen are satisfactory, and to see whether they are likely to succeed in the courses of training undertaken, and if not, to advise that a change be made.

DISCIPLINE.

The discipline exercised over the men is that ordinarily exercised in civil life—the pay cheque. Their time is kept the same as in employment, and if they present themselves every day to take training they receive allowances for that time. If, on the other hand, they absent themselves from the class or place where they are training, without excuse, allowance for the period absent is deducted. If the men are sick they are given free treatment and excused from classes.

All men being trained “live out.” This is part of the general policy of the Department to cast the men as soon as possible upon their own responsibility.

WARD OCCUPATIONS

Vocational work in the Hospitals in Canada was started from an educational point of view. It was not long, however, before its curative value became evident, and classes were organized for occupations requiring physical exertion such as carpentry, auto mechanics, etc. This was the beginning of curative workshops. The value of this branch of occupational therapy was so marked from a therapeutic standpoint that it was decided to commence work earlier, during the period patients were in hospital.



CURATIVE WORKSHOP. BRASS-WORKING CLASS, IN WHICH MEN UNDERGOING TREATMENT AND WITH MECHANICAL BENT HAVE AN OPPORTUNITY OF COMBINING PLEASURE WITH CURE.



CURATIVE WORKSHOP. CLASS IN BOOK-KEEPING, STENOGRAPHY AND TYPEWRITING.

At this time, although curative workshops had been provided, it was no uncommon sight to see large numbers of men in an institution spending their time in complete idleness or else in card playing, or in games of chess or checkers. It seemed impossible to get the majority of the men to the curative workshops. There was a gulf between the state of idleness and the habit of work in the shops. This has now been successfully bridged by the work of the Ward Aides.

In the curative workshops the work is somewhat heavy, and while it has a diversional side this aspect has been reduced to a minimum. In ward occupations, however, the diversional side of the work is found to its greatest extent. In the whole process of bringing the invalid back to his proper relation to civil life, a beginning must be made by diverting his mind from the morbid state into which it may have fallen. In diverting his mind a mental stimulus is necessary. As the work proceeds, through the more serious subjects taught in ward occupations and curative workshops, the diversional side of the work decreases, the mental stimulus increases, and this, together with the increased physical activity, hastens the functional cure.

The peculiar value of this work lies in the fact that no matter how helpless the invalid is, there is something he can do to occupy his mind. In severe cases the Ward Aides may find it

necessary to read to the patient first in order to stimulate his interest. By gradual steps the man's physical and mental activities are transferred from diversion to occupation, from unconnected work to processes having sequence and order.

The first impression made on a visitor to a hospital in which returned men are being treated is the great activity displayed; the patients on all sides, including those in bed, engaged in a variety of occupations, the smartly uniformed young women busily engaged in guiding and helping in the work, and the happy, contented atmosphere pervading the whole place.

Baskets in every stage of operation and of every variety, weaving looms both large and small, turning out every pattern and design one can think of, frequently operated by a man with only one arm; some patients doing wood carving, some making bead chains, others doing knitting and fancy work; still others, with an eye to the future, being engaged in a course of study in order to brush up their former vocation, and so on, are in evidence.

THE VALUE OF WARD OCCUPATIONS

There has been a great deal of argument about the value of ward occupations. Some say basketry, weaving, etc., should not be taught to men—that they are effeminate occupations.



CURATIVE WORKSHOP. CARPENTRY CLASS IN SOLARIUM OF STE. ANNE DE BELLEVUE HOSPITAL, QUE.

There is no intention that the occupation taught in the wards should be followed for gain after leaving the hospital; this work only leads up to the more serious work in the curative workshops. It is the medium through which the first mental stimulus is introduced. It is the agency by which a patient is induced to forget himself and take an interest again in other people and other things.

Ward occupations were instituted at about the same time in 1917 in two centres—Montreal and Whitby. In both these places the work was started as an experiment to fill a long-felt want. By the spring of 1918 the value of the method had been so demonstrated that it was thought desirable to spread it quickly throughout the whole of Canada.

SELECTION AND TRAINING OF WARD AIDES

The choosing of a young woman to be trained as a Ward Aide is important. She must be of the very best type, well educated, and must possess a personality which is bound to please, together with a healthy constitution. It is desirable that she should be between the ages of 25 and 35, have unlimited patience, be intelligent and not too emotional. She must be prepared to meet all kinds of difficulties and all kinds of treatment. The work is very hard. This is largely due to the mental strain to which these workers are subjected.

The experience of the Department, however, has shown that a period of three months is quite sufficient to train Ward Aides.

All the Ward Aides in Canada are paid and have regular hours; there are no voluntary workers. During training they receive \$55 per month, and after graduation, \$75 per month, out of which they pay their own living expenses. They are also supplied with uniforms. Every girl must take a course of training and sign a contract to stay with the Department at least one



OCCUPATIONAL THERAPY. THIS MAN SUFFERED FROM FRACTURE OF THE RIGHT ARM, AND IS BEING TAUGHT TYPEWRITING AND STENOGRAPHY AT ST. ANNE DE BELLEVUE HOSPITAL.



DEPARTMENT MACHINE SHOP, WHERE A NUMBER OF DISABLED MEN ARE BEING RE-TRAINED FOR MACHINE SHOP OCCUPATIONS.

year, and must go to any part of Canada where she is sent. The organization throughout Canada is as follows:—

In Ottawa there is a Supervisor of Ward Occupations who controls the work throughout Canada, through the Director of Vocational Training.

In each district the Ward Aides come under the District Vocational Officer for administration. This officer has a Supervisor of Ward Aides in charge of all the Ward Aides in his district.

In each hospital one woman is in charge of all the Ward Aides in that hospital; in large hospitals where there are a large number of Ward Aides her duty is purely administrative, but in small hospitals where the number is small she may assist in the work herself.

SALE OF ARTICLES MADE BY PATIENTS

When material is supplied to a patient he is charged with the cost of same in his account, also with a small amount to cover overhead expenses, freight-handling, etc., but nothing for administration. When he completes the article he is allowed to keep it on payment of the charges in his account; if he wishes to sell it, it is given a distinguishing number and he is credited with it in his account. When the article is sold the balance of the cash received over the debit in his account is returned to him.

The Supervisor of Ward Aides in the district arranges for the sale of these products through departmental stores or other commercial mediums of sale. All articles are sold on a commercial basis—not on a compassionate one. No patient is allowed to sell his work individually in the hospitals, nor are individual sales recognized by the Department. No orders for work are taken for future delivery.

Another important feature of the work of the Ward Aides is the information they are able to give to the men in the wards in regard to the activities of the Vocational Branch. They describe the curative workshops, industrial re-training, and give the men information as to the regulations of the Department in regard to them. If a man is too disabled to go back to his former occupation this information immediately sets his mind at rest as to his future, and he usually begins to speculate as to what he can do when he is well enough to leave his bed.

CURATIVE WORKSHOPS

It is not easy to draw a hard and fast line dividing the ward occupations from the curative workshops. Training in the latter, however, should be undertaken by men who have so advanced in their period of convalescence as to be able to move around freely, leave the wards, enter the shops and undertake considerable



CLASS IN WOODWORKING.



ELECTRICAL CLASS. A VERY POPULAR LINE OF WORK, AND ONE THAT OFFERS A LARGE NUMBER OF OPENINGS IN THE VARIOUS BRANCHES IN WHICH COURSES ARE TAKEN.

physical work. Both forms of treatment are therapeutic and curative in their object.

Four benefits are derived from the curative workshops:—they provide mental stimulus, functional re-education, mental diversion and (least of all) training, and knowledge as to a man's adaptability for a future occupation.

In the curative workshops classes in general education, commercial work, stenography and typewriting find a place. Typewriting has a direct functional curative effect on the muscles and nerves of the fingers, arms and back, but these subjects have also a curative effect mentally, as they teach a man mental concentration.

The value of the curative workshops in connection with mental cases should be fully realized. In the hospitals for mental treatment, both at Cobourg and Newmarket, very surprising results have been obtained in these workshops. Ward occupations and wood working seem to give the most benefit.

From a training standpoint the curative workshop is most useful in determining what course a man should take, if he needs re-training.

As in the ward occupations, any man making an article in the shops can obtain possession of it by paying the cost of the material. No articles produced in the curative workshops are allowed to be sold on the premises, nor is anyone allowed to take orders for future delivery.

In July, 1917, there were 638 men taking curative workshops and industrial re-training combined. The number in each class at that time was not known. On 31st December, 1918, there were 5,239 pupils taking this work.

INDUSTRIAL RE-TRAINING

Industrial re-training may be divided into two sections:—

1. Academic training, including professional courses, general education, civil service, book-keeping, accounting, municipal accounting, music and like subjects.

2. Such training as leads to manual occupations, highly skilled or otherwise.

ACADEMIC RE-TRAINING

The first class needs little explanation or comment, for the method of carrying out the training of this class differs little from ordinary educational systems. Business colleges, technical schools and universities are used in part, but owing to the fact that soldiers are best trained by soldiers, in order to accommodate the men entering and leaving at all times, and in other ways to adjust the training to the peculiar needs of the men, the Department has organized classes taught by returned soldiers for the carrying on of this work. Those taking up professional courses are sent to the universities and colleges, where they take the ordinary courses.



ELECTRICAL CLASS IN MCGILL UNIVERSITY.

PRIMARY TECHNICAL TRAINING

In the second class of training, however, the greatest departure from existing systems has been necessary, owing to the experience, age and physical condition of the students. Arrangements were made to have a number of students accommodated for preliminary training at the technical schools in Montreal, Toronto, Hamilton and London, but in most of the provinces no facilities of this kind existed. The Department therefore had to find other ways and means to accommodate the students. It was found on investigation that most of the university students in engineering courses had gone to the Front, and that these universities had equipment and space lying idle. The Nova Scotia Technical College and the Calgary Institute of Technology and Art were taken over by the Department and new equipment and space added, and are now conducted by the Department as industrial training schools.

McGill University, University of Toronto, University of Saskatchewan, University of British Columbia and Queen's University, Kingston, placed at the disposal of the Department such equipment and space as they had, and additional equipment was added. Arrangements were made with the Agricultural College at Truro, N.S., Macdonald College, Ste. Anne de Bellevue, Que., the Ontario Agricultural College; University of Manitoba; University of Alberta and the University of British Columbia to undertake agricultural training. In the province of Manitoba the Department built and equipped a training school of its own.

RE-TRAINING IN INDUSTRIES

The trainee, on the completion of a course in a technical school conducted according to the usual principles applied there, when he first enters employment on wages, finds himself among unfamiliar surroundings and feels nervous about his ability to make good. If he is trained under actual working conditions by an employer in the occupation he proposes to follow, his transition from training to wage earning takes place with the least possible dislocation. One week he receives his allowances from the Government and the next week he receives pay from

his employer. The transition is made practically unconsciously. The Department therefore adopted the policy of using only for primary training, technical schools and the methods usually applied there. As soon as a trainee could safely carry on in an industrial organization, he was placed there under practically apprenticeship conditions as to work, but remaining under the supervision of the Department and receiving allowances from it.

The following policies have been adopted by the Department, governing training in factories and industrial establishments:—

1. That the Government will pay the full cost of maintenance.
2. That the man being trained must conform to the usual discipline of the employer as to hours of work, etc.
3. That the man himself, the employer, and his fellow workmen, must be satisfied with the arrangement.
4. That if the factory is unionized the union must be satisfied.
5. That the first month or six weeks should be considered a probationary period.
6. That proper inspection must be instituted to see that the man is making progress, that he is being actually trained and not exploited, that medically the work is suited to his disability and that it seems likely at the end of his course he will be able to earn the full going wage in that occupation.

THE PART OF EMPLOYERS IN INDUSTRIAL
RE-TRAINING

It is expected of the employer that as a national duty the man shall be actually trained and not kept on piece work, and that instruction and not production shall be the prime object. If the manufacturer were compelled to pay part of the maintenance of the man he would consider it his right to avail himself of part of his labour in order to compensate himself for the time his foreman and superintendent spend in training, and for the use of machinery, space and material. It is for this reason that the Department continues to pay allowances to trainees while continuing training in industrial establishments.

It is not always possible when interviewing men to decide without trial whether they are fitted for a certain occupation. The first month or so therefore is considered a probationary period, and the man and his surroundings are inspected very carefully.

It is desirable in most occupations that some training be given in schools. If the average course be taken as eight months it will be found that in certain courses it is desirable to give one month's training in school and seven months in the industry. In other occupations it is desirable to give six months training in the school and two months in the industry. Therefore, in a great many of our schools we find men taking training which is used more or less as ground work for later training in the factory.

DAILY HOURS OF RE-TRAINING

The schools operated by the Department are kept open 7 hours a day. It is not intended that all men should be compelled to put in 7 hours

a day in school. Many, when they leave hospital and come to the Department for industrial re-training, cannot work that length of time, but one of the Vocational Medical Advisors sees to it that the hours of training in each case are not too long. While the students may work a smaller number of hours when they first come to the Department, the time should be gradually increased so that during the last month or two of their courses they should be able to work 7 hours. When they graduate into industrial life they will be expected to work 8 hours per day or possibly more. The Department aims to so accustom them to working 7 hours per day, having due regard to not impairing their physical well-being, that they will be able to successfully compete in the open market of endeavour with their unimpaired fellow-workmen who work 8 hours per day.

Experience in the organization of school work has demonstrated that soldiers must be kept apart from civilians. This is due to the



OCCUPATIONAL THERAPY. SHOWING PATIENTS AND THE WARD AIDES GIVING INSTRUCTION
AT STRATHCONA HOSPITAL, EDMONTON.

fact that the soldier students are on the average much older than the civilian students and they do not work well together. Also the courses for ex-members of the Forces have to be so much more flexible, and since the students are entering and leaving at all times, the classes in civilian institutions would be upset.

LENGTH OF RE-TRAINING COURSES

The average length of course varies between seven and eight months. A few courses are short, running three and four months, but these are very few in number. Some few courses run ten to twelve months, but the long courses are in such proportion to the short courses that they will average seven months.

When a course is granted for 6 or 8 months it is not intended that the man must definitely finish his course in that time. It merely means that this is the period within which the man is expected to finish his training. If at the end of the time allotted or shortly before, it is found that he has not quite completed his work, but that another couple of months would make him proficient, his course is extended, provided he has properly applied himself to his studies.

In carrying out re-training three classes of institutions are utilized—Inside Schools conducted by the Department, Outside Schools such as business colleges, universities, technical schools, etc., and Industrial Establishments where men are placed for practical training. On the 31st December, 1918, men were being re-trained in 33 inside schools, 54 outside schools and 329 industries, or a total of 417. On the 31st August, 1919, the number of pupils in 42 departmental schools was 5,555; in 226 outside schools, 2,606; and in 4,352 industrial establishments, 6,646; a total of 14,807 in training. In addition, 55 were attending evening classes. 346 instructors were employed in training the men in the inside schools, or an average of 16 pupils to each instructor.

INTERVIEWING

In the general scheme of industrial re-training there are two features which are of the utmost importance, and might be called the essential ones. They are: (1) Interviewing and aiding

the man in the selection of his course; and (2) The actual training for the occupation; and it is hard to say which is the more important. The success of the training for a man's future life depends so much on getting him started in the right course that one might almost say interviewing was the most important. The average cost to the country for re-training a single man without dependents is approximately \$640.00. It is therefore a sound business principle to spend sufficient money on interviewing to make it successful. Sufficient interviewers should be provided to give all the time necessary to consider the man's course completely and advise with him.

It is necessary that the interviewer should have diplomacy, tact, sympathy and the ability to enlist the man's confidence and respect. He must be able to put at ease the man he is interviewing and to find out what the man's aims and ambitions not only are, but have been. If, in addition to these qualifications, the interviewer has technical training so that he can understand by personal experience the training the man has to go through, so much the better.

It is also considered absolutely essential that the interviewer must be a returned man, as he is the only one who can talk to the man being interviewed on an equal footing.

TRAINEES SELECT THEIR OWN COURSES

The actual application for a course of re-training may be made prior to discharge from the army, but the course does not commence until after this date. In assigning a man to a course, the first requirement is that the man himself must be satisfied. The success he attains will depend almost entirely on the amount of enthusiasm and application he puts into his work. If he is not satisfied with the course he has selected, he will not apply himself and success will not result. If the Department did not use the powers of suggestion, persuasion or reason, in guiding the men, it would be found that 50% of them would take up commercial work, civil service and motor mechanics. Part of the interviewing may be done by the officer in charge of the curative workshops. In these curative

workshops it is a comparatively easy matter by inspection to find out whether the man has mechanical skill or not, or whether he is more adapted to clerical pursuits. This information enables the interviewer to decide what the man is best fitted for.

If an ex-soldier has a trade and is too disabled to follow it, the Department endeavors to raise him higher in that trade. The general aim is to raise him from the artisan class to the supervising class of employees. The Department endeavors to train him to become a specialist in some lighter and more highly skilled division in that trade. For instance, the house carpenter becomes a cabinet maker, or the printer a monotype or linotype operator. If a handicapped soldier had no trade before the war, he may be trained for an occupation.

RELATION BETWEEN NEW AND PRE-WAR OCCUPATIONS

One of the principles of interviewing which must be kept in mind at all times is that the occu-

pation chosen by the man must in so far as possible be closely related to his former calling. The general principle is that while building on a man's former occupation he should be raised from a heavier occupation in his former line to a lighter one. The lighter occupation, while being suited to his disability, usually draws higher wages.

DEVELOPMENT OF NATURAL ABILITIES

However, there are quite a number of men who have no occupation on which to build—some left school without an occupation, and others among them have always been laborers with practically no education. They have been drifters and have formed the great class of transient labor. A great many of these men have natural ability which has never been developed. Some are natural farmers, others have mechanical ability, and others are more fitted for clerical and sedentary occupations. With these men it has been the aim of the Depart-



CURATIVE WORKSHOP AT FAIRMONT HOSPITAL.

ment by every means possible—by inspecting in the curative workshops, by interviewing, or by getting at former ambitions—to find the man's natural aptitude and train him in some occupation along that line.

The first thing the interviewer must endeavor to decide is whether or not the man is eligible for training. After a short conversation with the man as to his war experience, former life and occupation, he is asked whether he can return to it or not. If he says he can return to his previous occupation the interviewer informs him that he is not eligible for training, but that if after entering civil life he finds himself unable to follow his previous occupation, he can come back to the Department and ask for training. Particulars are then taken as to his educational and industrial history and filed for future reference.

If on the other hand he tells the interviewer that he cannot return to his former occupation due to disability incurred on or aggravated by service, he is sent to the Vocational Medical Advisor, who examines him physically and mentally to determine whether in his opinion this is so.

If the man is found eligible for vocational training the interviewer then consults with him as to what training it is advisable for him to take. Wherever possible his former employer is consulted, provided the man wishes to return to his employ. In any case if the man has to be trained in an industry, a meeting is arranged between the interviewer, the employer whom it is thought may train him, and the man himself, before the course is decided on.

INDUSTRIAL SURVEYS

Shortly after Industrial re-training was organized and schools established for the rehabilitation of disabled soldiers it was found that the number of courses in the schools was limited to a small range of trades and occupations, and that if the policy of training men in this limited field were followed, there would be an over-production of workers in this small range.

Very little information was available as to the number of men employed in any occupation,

or as to the demand for trained workers. It was evidently useless to train men for occupations already crowded, and disabled soldiers would necessarily stand a better chance of making good in an occupation in which there was an active demand for workers. The Department found it necessary to gather this information at first hand, and to accomplish this the industrial surveys division was organized to cover the following points:—

1. To ascertain as far as possible under present conditions the occupational opportunities for disabled soldiers, the facilities for training them, and the possibilities for absorbing them after training, in the particular locality in which the survey is carried on.

2. To give concise, definite and accurate information regarding these industrial opportunities, to each Disabled Soldiers' Training Board, District Vocational Officer, or interviewer, in the district where re-training is to be given.

3. To determine the fitness of existing educational institutions in a particular locality for the re-training of disabled men for industry.

4. To grade the opportunities as to the stability of the field in each locality, or in the country as a whole, since some industries are similar all over the country, while others are peculiar to certain localities, and to ascertain when enough men had been trained in each occupation.

5. To inform an applicant for a course in re-training before he enters upon that course, as to all its limitations and advantages.

6. To ascertain the attitude of manufacturers and employers of labor towards the disabled soldier and to educate them toward a proper understanding and appreciation of the problem his case involves, and at the same time to present the aims and objects of the Vocational Branch of the Department of Soldiers' Civil Re-Establishment.

7. To establish a direct personal contact between the Vocational Officer of the district and the managers and foremen of a large number of industries with the result that, when the returned disabled soldiers are placed in

industries for the completion of their re-training, a personal interest will be taken in them by their employers.

8. To put the industrial surveyor in a position to render assistance in the establishment of aid and advice departments, follow-up systems, employment bureau, and also in the interpretation and working of the Workmen's Compensation laws and regulations.

In making a survey of an industry the chief executives of the concern, the President, General Manager, and foremen are interviewed first; finally each branch of the industry is visited and the workers performing each particular operation carefully observed. Meanwhile, survey sheets are filled in.

The first duty of the industrial survey department is to familiarize itself with the most common disabilities incurred by soldiers on active service. The medical records at Headquarters, Ottawa, are carefully studied, grouped, listed, tabulated and analyzed so as to note the effect of disability on movement.

In surveying an industry it is necessary to ascertain the number of men who may be placed there for training, specified by departments and occupations, as well as the qualifications, physical, educational and industrial, which are necessary in order to obtain the full benefit from the training offered by this industry.

Information is sought regarding the surroundings of the factory and detailed observations regarding light, heat, ventilation, number of floors, character of grounds, fire escapes, sanitation, whether or not midday meals may be obtained within the factory, distance which a worker may have to walk in order to get his luncheon, lodging, rent in the locality (both house and room rent) factory societies, unions, amusements, recreations, and welfare bureaux which are controlled by the industry.

It is important that information be available as to the number and occupations of maimed workers already employed, what safety appliances on machinery of various types exist, any



RE-TRAINING IN INDUSTRY. LEARNING LEAD GLAZING.

extra or additional hazards which may be noted, whether the employment is stable or unstable and many other matters. All the industrial surveyors are returned soldiers.

It is gratifying to note that, after two years of this investigation work, most of the manufacturers who have been interviewed have shown keen interest in the project, and have given their unbiased opinion, and many times have offered very helpful suggestions which have been introduced into the training schemes. Some of the reports which were made of the larger manufacturing industries embrace an analysis of six or seven thousand workers. Other reports are of much smaller volume, but contain vital information.

These surveys are carefully indexed and filed, and the interviewers are required to keep themselves posted on the contents of these files. The information in them is also classified on card indexes under occupations. If an interviewer or training board wishes information in regard to storage battery repairing, the card will show the number of openings in that occupation and the surveys of plants where it can be found. If a disabled soldier has before the war worked at a heavy occupation in a piano factory, the interviewer will call for the survey of the piano factory in which the man has worked and in consultation with the man endeavour to select some lighter occupation in the factory for which he may be trained.

Through this work an almost endless number of new occupations have been discovered for disabled men. At one time it was thought that there were very few occupations suitable to the disabled, but it has been found that in nearly every industry there are many things at which a handicapped man can earn the full going wage in competition with able-bodied men.

MEDICAL ASPECT OF INDUSTRIAL RE-TRAINING

The Vocational Branch has a sufficient number of doctors detailed to it in each unit by the Director of Medical Services to do such medical work as is required by the District Vocational Officer, except medical treatment.

All medical treatment is taken care of by the Medical Branch of the Department.

The Vocational Medical Advisors come under the Unit Medical Director for inspection, criticism and advice in regard to technical medical matters, and under the District Vocational Officers for direction as to their daily duties as Advisors to them.

The duties of the Vocational Medical Advisor are:

1. To advise the District Vocational Officer or Director of Vocational Training, from the medical point of view, as to whether the handicapped soldier is eligible for training.
2. If he is eligible for training, to advise if from a medical standpoint he is likely to be able to carry on in the new occupation selected by him.
3. To advise the Director of Vocational Training, after the man has started training, as to his continued suitability for the occupation he is learning.
4. To inspect men reporting sick during training and to send them to the Unit Medical Director for treatment if this is found necessary, and to inspect their places of training.
5. To undertake research work regarding the medical aspects of vocational training.

The last medical board is regarded by the Department not as a deciding factor as to the man's eligibility, but only as evidence in the case. Numerous cases come up where it is shown that men had disabilities when they enlisted, and although there is no mention on the medical boards of any treatment of these disabilities, in many cases there is circumstantial evidence that they may have had some treatment.

The question of a man's eligibility for industrial re-training having been established, the Vocational Medical Advisor must advise the District Vocational Officer and Disabled Soldiers' Training Board as to the suitability from a medical standpoint of the new occupation selected by the man.

In order to assist the doctor in advising in regard to these matters, he is supplied with a record of the work done by the man with the Ward Aides and in the Curative Workshops.

These records if properly taken will cast a great deal of light on the man's mental ability or his mechanical adaptability.

Another feature of the Vocational Medical Advisor's work consists of attending to the man's medical care while he is taking training. A man during training may fall sick for two reasons:

1. Through a recurrence of his war disability.
2. Through ordinary disease or accident not connected with his war disability.

In the first case he is entitled to treatment under the regulations of the Department. In regard to the second, it was felt that if a man took sick while taking training, the most economical policy was to treat him for his sickness so that he might return to his course at the earliest possible moment and his time not be wasted. The Vocational Medical Advisor, therefore, inspects the schools and factories, and if any men are found ill they are sent to the Unit Medical Director for treatment, since the Vocational Medical Advisors undertake no treatment. If his treatment is likely to be of short duration he is kept on vocational pay and allowances, but if it is likely to be of long duration he is

transferred to the pay and allowances of the Medical Branch.

To give sound advice, these Vocational Medical Advisors must not only have the prerequisite of professional ability—they must also have an intimate knowledge of industrial working conditions, which physicians usually do not need in the practice of their profession; otherwise they could not bring to bear on the medical industrial problems the necessary appreciation of industrial processes entering into them.

This specialized service was found by experience to be rendered most efficiently by physicians who divorced themselves, for the time being, from treatment of cases. This enabled them to devote their whole attention to the development of principles that might be applied in giving professional technical advice on a problem which had never before presented itself in such a comprehensive way.

CARE OF THE BLIND

Soldiers have suffered loss of sight in many ways, but there are two fairly distinct classi-



RE-TRAINING IN INDUSTRY. OXY-ACETYLENE WELDING WORKSHOP.

cations, viz., blind soldiers and blinded soldiers. By blind soldiers is meant those who have suffered a gradual deterioration of vision due directly or indirectly to service. Blinded soldiers are those who were actually wounded in battle or were so affected by wounds that loss of sight resulted. The Department is now acquainted with practically all the cases of men who are blind or potentially blind due to wounds, but those whose sight is slowly deteriorating, either before or after discharge, are gradually increasing in numbers.

There are several points which must be kept in mind in connection with the re-training offered to a blinded soldier. First—he is a man who is normal in every way, but only deprived of the sense of sight. Secondly—he has received all his former education and experiences from a sighted standpoint and requires only re-adaptational training which will fit his former education and experience to his present needs.

In order to secure an official for the Department who would have the proper view-point and experience for dealing in the most effective way possible with further problems that might come up, the services of Captain E. A. Baker, M.C., Croix de Guerre, the first Canadian Officer graduate of St. Dunstan's, were secured. Captain Baker had after his return been employed for nearly two years with the Hydro-Electric Power Commission of Ontario in their head office at Toronto. He had vouched for the practical nature of the re-adaptational training given at St. Dunstan's, and exemplified the idea that blinded soldiers could in many cases do better than follow one of the ill-paid handicrafts usually assigned to blind people. Captain Baker entered upon his new duties on 1st August, 1918.

Early in the war, Sir Arthur Pearson, Bart., instituted St. Dunstan's Hostel at Regent's Park, London, for the care and training of blinded soldiers and sailors. This Hostel is operated along unique lines, the principal aim being to teach the men who are sent there how to be self-supporting even in spite of their being blind. In this Institution blindness is not referred to as an affliction, and the men in this way are taught to face their difficulty.

At first, members of the Canadian Expedi-

tionary Force who had lost their sight were not given an opportunity, unless they requested it, to go to St. Dunstan's, but were returned to Canada for training. Later, however, it was realized what an advantage would be obtained for the men who would be trained at St. Dunstan's where the majority of the students are returned men and where the forceful personality of Sir Arthur Pearson and his new methods of dealing with the blind would be felt. Consequently it was arranged by the Canadian Government, in co-operation with Sir Arthur Pearson, that all Canadian blinded should be trained in St. Dunstan's before their discharge and return to Canada.

Those blinded soldiers who had returned to Canada without such training were given the opportunity of returning to St. Dunstan's for training or of attending one or other of the established Canadian Institutes, including Halifax School for the Blind, Ottawa Blind Institute, Montreal School for the Blind, Canadian National Institute for the Blind in Toronto; or the training was carried out at Hart House, Toronto, where a blinded masseur, a graduate from St. Dunstan's, was employed as Instructor; or at the Guelph Agricultural College, where also a blinded Instructor, a graduate from St. Dunstan's, was employed in poultry raising. Several of the Canadian blinded have selected one or other of these methods of training with marked success, being now after graduation employed in a permanent capacity in civilian life.

Blind instructors are invaluable. If the man recognizes the fact that the individual giving the instruction was but recently in the same position as he himself, he realizes that the instruction will be practical and also that he is not being asked to do something that has not been done before by those labouring under the same handicap. He is at once fired with the ambition to do the thing as well as the other fellow, and says to himself, "If the other fellow can do it, I can." This mental stimulus cuts down the period of training greatly. Also by eradicating the term "affliction" and impressing each man with the idea that he has but to overcome a handicap which has been imposed, a more cheerful and ambitious bearing is induced.

To increase confidence, attention must be paid not only to work, but to recreation and

sports. By occupying every moment of spare time the man's mind is not permitted to dwell on his limitations, and he is rendered capable of taking part in games and sports particularly suitable. As has been said, a man learns by experience, and through various forms of sport is taught to be self-reliant and confident in his movements.

The range of subjects taught to blinded soldiers may be divided into three classes: General Re-adaptional Education, Vocations, and Avocations or Side-lines. Included in these are Typewriting, Massage, Business Courses, Carpentry, Poultry Farming, Basket-making, etc. Men are from the beginning taught to read and write by the Braille method. Every man who has made good progress is presented with a Braille writer on graduation, and with this he can record his own notes for future reference, and attend personally to his private and business papers. In many instances a typewriter is also presented.

After Care. It is one thing to train a blinded

soldier in such a way as to follow some definite line of occupation, but it is entirely another matter to see that he makes proper use of his training and is the self-supporting and independent individual that he was intended to be, and for which he was equipped. With this end in view, St. Dunstan's has found it necessary to establish in Great Britain very comprehensive arrangements for the settling down, periodical visiting of, furnishing of raw material and selling of manufactured products, and in general supervising the personal and business details in connection with every man who has graduated from its classes. Faults in processes or methods which are so apt to appear from time to time, and which are so disastrous to success, if not corrected in the early stages, are thus detected.

Canadian blinded soldiers who after graduating have settled down or who will settle down in Great Britain, will of course come under the benefits of this system, and will have no cause to worry as to their futures, so long as



RE-TRAINING IN INDUSTRY. AMPUTATION AND OTHER SEVERE DISABILITY CASES BEING RE-TRAINED IN A LIGHT FORM OF OCCUPATION—GOLD NIB GRINDING.

they are conscientious and careful about their work.

In Canada, however, the problem is quite a different one. There are less than ten per cent of the number of men to look after, and these are scattered over probably fifty times as great an area. When, therefore, the graduate is prepared to settle down in his own locality, word is sent to the District office and a representative there endeavours to secure some proper location, if the man has not already a home to go to. Advice can be secured at any time from the officer in charge of the work in Ottawa, and interest is to as large an extent as possible created in the proper quarters where it is thought it will be of service to the man in question. It is, however, planned to make "Pearson Hall," an institution opened in Toronto by the Canadian National Institute for the Blind, which Institute has also established a Dominion-wide organization for the carrying on of "after care," the headquarters of the after care arrangements in Canada, and to keep supplies of raw material on hand in suitable locations, and also a warehouse and sales room for the handling of manufactured articles.

A complete record is kept at the Head Office of the Department of all blinded graduates, and some very interesting information is on file as to the success of these men in their chosen callings.

The number of Canadians who are reported to be suffering from blindness and defective eyesight so far discharged from the Canadian Army is 1,345, of whom 130 have lost sufficient sight to require re-training, 34 cases are under investigation, and it is expected that approximately 19 of these will be eligible for re-training. Of the 164 cases which have been trained or are under investigation, the following is a division:

Loss of both eyes.....	54
Loss of right eye.....	20
Loss of left eye.....	19
Other visual disorders.....	71

Of the 34 under investigation 4 have lost the sight of both eyes, 4 that of the right eye and 7 of the left.

Sixty-three men are undergoing training, 30 being at St. Dunstan's and 33 in Canada.

These men are undergoing training as follows:

1. Massage.....	11
2. Poultry Farming and Carpentry	10
3. Boots and Mats.....	7
4. General Training.....	23
5. Stenography.....	2
6. Carpentry.....	5
7. Chiropractice.....	1
8. Broom Making.....	3
9. Vocal.....	1

MINORS

An extension of the vocational training privileges was granted in April, 1919, by which those who enlisted under the age of 18 years and thereby suffered a severe interruption to their training might, at the discretion of the Department, be trained in industry or in a technical school, college, university, business college, or in one of the department's training classes. The Department was charged with the duty of the selection of those who appear to be eligible, and, by a recent enactment, they are paid the same rates of allowances as those granted to men who undergo re-training because of disabilities incurred on service.

It was realized by the Department that a large number of these young men if they had continued their work would, in the course of time, have become skilled workmen and in a position of self-support and independence, but that the years they spent in the army were just those during which they should have been fitting themselves to earn their livelihood in the occupation for which they had prepared themselves.

It is recognized that it would be unfortunate if these men were forced into the ranks of unskilled labour, with an added handicap on account of the age at which they were starting. If, on the other hand, they could be trained under the guidance of competent instructors or carefully supervised industries, their experience in war might be turned to advantage both to themselves and to the country.

From the commencement of this work to the 31st of October, 1919, 7,548 courses were approved, while 5,291 men were undergoing training under these provisions.

INDUSTRIAL RE-TRAINING

AFTER-CARE AND RESULTS

In any enterprise conducted for gain, the results are finally measured by the profit and loss account. On the debit side is placed the expenditure, and set off against this on the credit side is the income, the balance being profit.

In industrial re-training, however, the debit side is ever present, but the only credit is the number of men stabilized in civil life. This result can never be measured in dollars and cents. In order, therefore, intelligently to administer the work of industrial re-training it was thought that the Department should make a serious endeavour to find out what became of its graduates. It was also thought that it would be unwise to spend money on training men without making some effort to see that they took advantage of the training. The work could not be considered as finished until the man was stabilized in employment.

The most critical time for these disabled men

is the first month or two after they graduate from training and return to wage earning. In order to meet these objects the follow-up and after-care was organized. Information is thus gained regarding failures and faults, where improvements may be made, which courses are successful and which unsuccessful.

The practical success of an industrial re-training scheme for disabled soldiers can be determined only by a study of averages. Individual success, however brilliant, can never be taken as proof that the system is efficient, nor can individual failure condemn. Only after a careful study of all the records of men who complete their re-training during a certain time, men of different ages and disabilities, can any definite conclusion be arrived at.

The follow-up system was not put in force until the work had been in progress for one and a half years and it was necessary to get in touch with men who had already graduated and left. This was done through the Pensions Board and their visitors, through writing letters to their



RE-TRAINING IN INDUSTRY. LEARNING TO MAKE FOUNTAIN PENS. A LIGHT FORM OF OCCUPATION PARTICULARLY SUITABLE TO MEN WITH SEVERE DISABILITIES WHO HAVE INCLINATION FOR MECHANICAL WORK.

addresses, and through the Great War Veterans' and other returned soldiers' associations.

It is believed that Canada is the only country to-day having a complete follow-up system for the graduates of industrial re-training.

The following, therefore, is a discussion of the results of industrial re-training only, based on the information gathered through the follow-up and after-care departments.

Up to December 31st, 1918, 9,223 applications for re-training courses had been recommended to Ottawa by the Disabled Soldiers' Training Boards. Head Office concurred in granting 8,004 courses with pay and allowances. Out of the balance of 1,219, 612 had been found ineligible and the remainder were waiting the result of further information or further medical treatment.

The 8,004 courses granted on December 31st, 1918, were distributed as follows:

Courses not accepted	455
Courses discontinued	707
Courses not commenced	1088
Men in training	3469
Completed Courses	2285
	8004

"Courses not accepted" refers to men who have been granted training, but for some reason have declined to take advantage of it. In striving to find the weak points in the re-training system it would seem that discontinuance of training by 1,669 men might furnish the key to certain defects, and therefore a study was made as to the disposal of 707 of these men who had discontinued their course. They were carefully examined and classified in 14 groups.

The number and percentage of men in each group are as follows:

						Percentage of total men trained or in training Dec. 31st, 1918, which was 5,475.
1. Satisfactory work in other lines than that for which they were training	165	23.34%				
2. In business for self.	2	.28				
3. To take up Land Settlement	14	1.98				
4. Taking further course.	3	.42	184	26%	3.2%	
5. Deceased	17	2.41				
6. Re-attested in C.E.F.	32	4.53				
7. Ill health	46	6.51				
8. Courses cancelled on account of bad attendance or misconduct.	27	3.82				
9. Domestic Troubles	10	1.41				
10. Gone abroad	94	13.30	226	32%	3.9%	
11. No apparent reason for discontinuance	100	14.14				
12. No information given	175	24.75				
13. Course not suitable or man not satisfied	12	1.70				
14. Allowances insufficient	10	1.41	297	42%	5.2%	
	707	100.00%	707	100%		

A total of 5,774 men have been approved for training but have not yet commenced. These are men who have gainful occupations at the present time, possibly of a temporary character.

There are no men at the present time awaiting training on account of lack of facilities.

On 31st July, 1919, 4,743 had completed their training. The table herewith shows a summary of the follow-up reports from graduates from all units up to 31st July, 1919. The 4,743 graduates have been divided into:—

	No.	Percentage.
1. In employment, following line of training....	3,130	66.
2. Following other lines than those for which trained	1,147	23
2. Unemployed	267	5.7
4. Sick or deceased	199	4.3

Of these 1,147 men not following line of training, 431 of them were found to be distributed as follows:—

	No.	Percentage.
Unskilled occupations (manual)	45	10.4
Unskilled " (general)	199	46.2
Skilled " (manual)	54	12.5
Clerical	4	0.9
Professional	7	1.6
Farming	12	2.8
Soldier (re-enlisted for light duty)	12	2.8
Civil service	24	5.6
Student	7	1.6
Returned to pre-war occupation	67	15.6
		100. %

Among the 23.45% who are following other lines of occupation, will be found a number of men who went back to their old occupation. The fact should not be lost sight of that a number of men are awarded courses who, at the time their cases come up for consideration, sincerely believe that they cannot return to their former work. They are not malingerers, but their belief is due to a state of institutionalism induced by their life in the army and in the hospital. After a few months of training with the Department they find that their idea is false and go back to their old occupation, but if they had not been trained by the Department they would have persisted in their former state of mind and very likely have sunk lower and lower in the social scale.

Other men go back to some former occupation different from that given when they were interviewed. Others find remunerative employment



A CLASS IN MECHANICAL DENTISTRY.



RE-TRAINING IN INDUSTRY. LEARNING RUBBER BOOT MAKING.

in other lines of work for which little or no training is necessary.

Some men come from the hospital unable immediately to follow the work in which they were engaged before the war, for the reason that while the doctors have done everything possible for them, their convalescent period is not yet over and they must be given work in the meantime, otherwise their disability would increase through idleness and they might become confirmed cripples. Having followed a course of training they have become physically fit and return to their previous or some other occupation. These all fall within the 23.45% and are regarded by the Department as successful.

It is significant that while these men may be following some other occupation than that for which they were trained, the fact remains that they are in employment, and that when they came to us they sincerely believed that they could not follow any gainful occupation.

5.65% of the men trained are unemployed. This table was drawn up shortly after the 31st of July. A number of the men who had graduated within a week or so of this date and had not found employment would be found to have employment later. The Department grants an extra month's allowances to tide over this period. Others are what might be called the unemployable, those who in civil life did not want to work and never would, while with others we have failed in our endeavor to train them.

However, the mere fact that men are employed is not a sufficient measure of the success or failure of industrial re-training. It is the aim of the Department so to train these men that they will receive the full going wage in the occupation in which they are placed. Also this wage must be sufficient to keep them respectably and comfortably in the station of life where they find themselves. The men should be put in as good a position or better, from the wage earning standpoint, as they were before the war, notwithstanding their disablement, and without regard to any pension they may receive. The analyses made are satisfactory in this respect, showing that there is considerable average gain among the graduates over pre-war earnings.

The training of handicapped soldiers is new; it has never been done before the present war. The organization and carrying on of the work was undertaken under war conditions at numerous points in Canada, which has an area of 3,729,665 sq. miles. The results are far from perfect—no system of this kind can ever be perfect; it is always in the process of development. The results, however, go to show that, from now on, few if any disabled soldiers need despair of being able to place themselves on a self-sustaining basis, and may become self-respecting, producing members of society.

COSTS AND STATISTICS

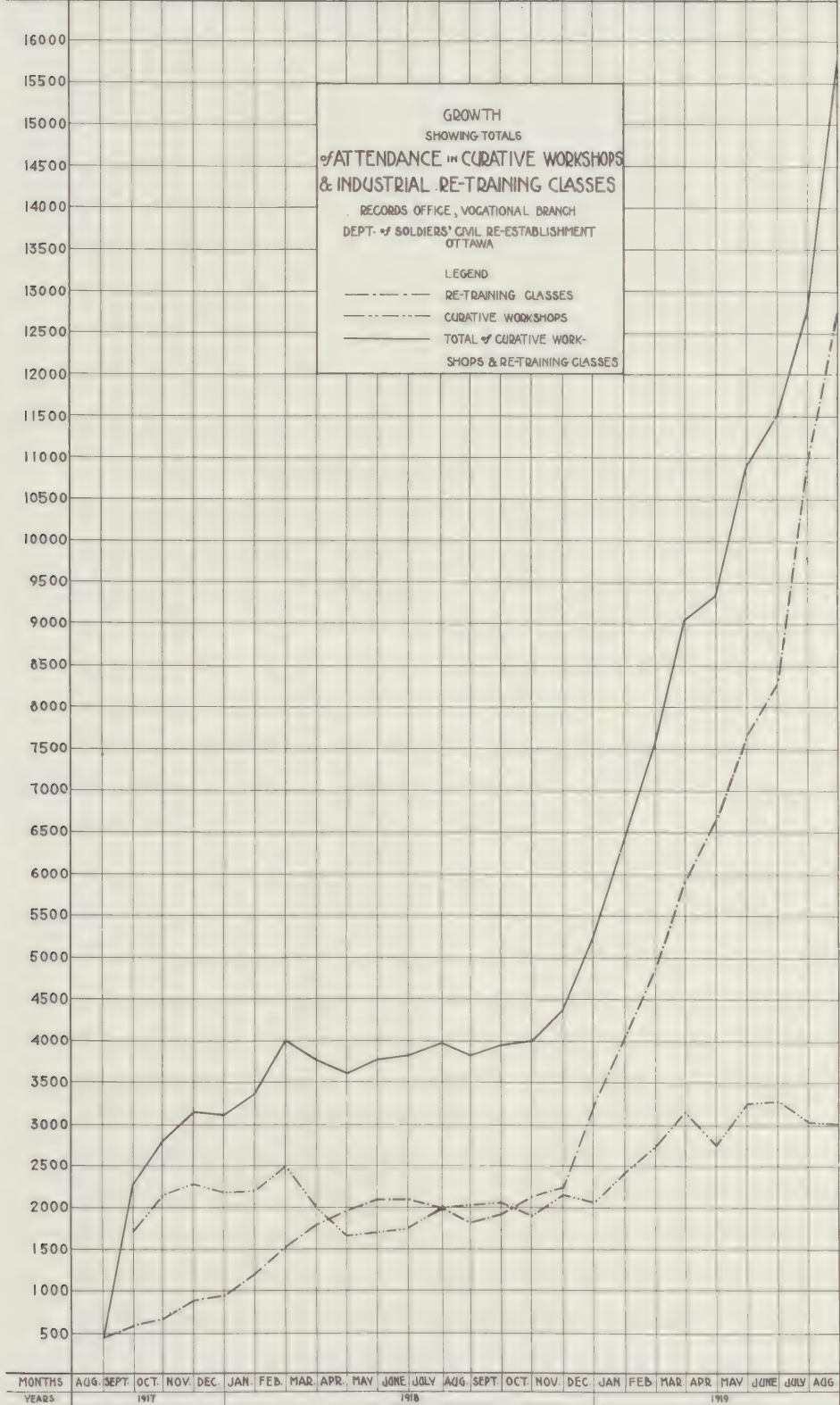
Although it is necessary, from the administrative standpoint, to know the cost of doing certain work, it must also be borne in mind that the efficiency of the Vocational Branch cannot be measured by the cost, because in the last analysis the purpose is to re-train disabled soldiers, and not manufacture articles or material at a minimum cost. However, in order that all equipment and supplies furnished may be handled judiciously and conserved as part of the nation's wealth, it is necessary that a very strict supervision be placed upon their use and disposal, so that the losses of supplies through careless workmanship or general shortages may be minimized, and the too rapid deterioration of equipment may be controlled.

The unit used to measure the costs is the cost per month per man taking training. Included in these costs, however, are a number of items that should not be charged to training but which cannot be readily separated.

In addition to a large number of interviews with men who are granted courses, the Vocational Branch interviews all men discharged through the invalided section of the military discharge depots. Since the inception of the work the Branch has interviewed over 61,000 men in person, as to their need for re-training. The expense of the interviewing and clerical work in connection with this work is carried by the cost of training.

Included in these costs also is the cost of training the Ward Aides and administering their

TOTAL STUDENTS	2508	2833	3171	3153	3389	4031	3817	3624	3776	3815	3981	3801	3955	3998	4398	5239	6389	7557	9059	9400	10955	11569	14110	15824
INDUSTRIAL RE-TRAINING	592	660	883	964	1214	1537	1807	1956	2077	2070	1990	1877	1911	2119	2250	3189	3998	4829	5920	6673	7682	8909	10881	12820
CURATIVE WORKSHOPS	1716	2165	2288	2199	2175	2494	2010	1668	1699	1743	1991	2004	2044	1879	2148	2050	2391	2728	3139	2727	3253	3260	3022	3004



work. None of the men who take work in the wards is enrolled as a student. The full cost of training the 270 young women for this work has been charged to "D" Unit.

The costs include the salaries of the Vocational Medical Advisors and their office expenses, also the costs of the industrial surveys as well as the costs of the after-care department.

It is impossible to compare these costs with those in any other educational system on account of the expense of interviewing, inspecting, medical examination, industrial surveys, after-care and ward aide work, and also because the individual nature of the work done for each man is not done in high school, technical school or university. The system of individual instruction and flexible syllabi is nowhere carried to the same extent. This entails fewer students to each instructor and a greater executive staff. This system also carries the expense of factory inspection, industrial surveys and medical work, not carried by any other system, all of which is included in the cost per month per man.

The remarkable expansion of the work has necessitated considerable expense for organization, and since the work was so new a great deal of research and experiment had to be undertaken. This is all carried in the unit costs.

The total of the current vocational expenditures, exclusive of pay and allowances by Units, has been carefully recorded from August, 1917, to December 31, 1918. A compilation of these expenditures is attached to this report, which shows the total expenditures for all Units, both individually and collectively, and the gross total for the 17 months amounts to \$1,240,469.78, without pay and allowances.

As an example of how this work is carried on, a specific instance may be taken:—The expenditure for "A" Unit for one month, amounted to \$2,481.79. The total number of individuals attending classes during that month was 227. Therefore the result of dividing this expenditure by the number of individuals receiving training is \$19.42, which gives the unit cost per man for instruction for that particular month.

This study has been carried on for the seventeen months as noted and the average expenditure for all units are tabulated. From this analysis the highest cost per man per month in any unit is \$23.06, while the lowest is \$14.02, giving an average cost over all Canada for this period of seventeen months of \$18.07 per man per month.

It is very difficult to obtain information as to the costs of carrying on work in educational institutions. However, the Bureau of Education of the Department of the Interior, United States Government, has made some investigations into the costs of operating universities and agricultural colleges in the States of Washington and Iowa. In Bulletin No. 19 issued by that Bureau in 1917, on page 110, are found some very interesting figures touching the costs in these institutions. The costs given in this table cover all current operating and administrative expenses, but not capital cost, and are comparable with those given in table three of this section. The costs in these institutions for the school year for each man based on the average attendance are as follows:

State University of Iowa.....	\$271.00
Iowa State College of Agriculture and Mechanical Arts.....	271.00
University of Washington.....	192.77
Washington State College.....	289.79

The average of these four is \$257.26 per man per school year.

The report does not state the length of the school year, but it is probably seven months. If, however, it is taken as eight months, the average cost per month per man would be \$32.16, which is much higher than the average cost in the Vocational Branch of the Department.

It must be remembered that these colleges do not carry the charges for interviewing, medical care and examination, industrial surveys, after-care, transportation of students, Ward Aides and the training of certain instructors, as do the costs of the Vocational Branch of the Department of Soldiers' Civil Re-Establishment.

List of occupations for which Disabled Soldiers have been training or are being trained. This list is increasing month by month.

- | | |
|-----------------------------|-------------------------------------|
| 1. Agriculture | 46. Brass Novelties |
| 2. Adding Machine Repairs | 47. Chemistry |
| 3. Auto Painting | 48. Carriage Painting |
| 4. Artificial Limb Making | 49. Civil Engineer |
| 5. Art Metal Work | 50. Cheese Making |
| 6. Armature Winding | 51. Cable Telegraphy |
| 7. Advertising | 52. Cabinet Maker |
| 8. Auto Mechanic | 53. Commercial |
| 9. Auto Tire Repairs | 54. Concrete Construction |
| 10. Air Brake Mechanic | 55. Coremaking |
| 11. Architectural Drafting | 56. Carpet Weaving |
| 12. Aeroplane Manufacturing | 57. Civil Service |
| 13. Auto Salesman | 58. Carpentry |
| 14. Auto Upholstering | 59. Commercial Designing |
| 15. Auto Truck Driver | 60. Central Telephone Office Work |
| 16. Accountant | 61. Cash Register Assembling |
| 17. Animal Husbandry | 62. Cylinder Press Feeder |
| 18. Assaying | 63. Cloth Weaving |
| 19. Auctioneering | 64. Commercial Illustrating |
| 20. Art Lead Glazing | 65. Confectioner |
| 21. Bicycle Repairing | 66. Commercial Art |
| 22. Battery Making | 67. Comptometer |
| 23. Bird Cage Making | 68. Chiropody |
| 24. Boat Building | 69. Clock Repairing |
| 25. Book-keeping | 70. Cigar Making |
| 26. Barbering | 71. Cornet Playing |
| 27. Bronze Moulding | 72. Cleaning & Pressing Clothes |
| 28. Building Construction | 73. Cartooning |
| 29. Boiler Inspector | 74. Composing |
| 30. Battery Repairs | 75. Cooking |
| 31. Brush Back Boring | 76. Cotton Spinning |
| 32. Brush Making | 77. Dry Goods Salesman |
| 33. Boiler Laying | 78. Drafting and Estimating |
| 34. Brass Finisher | 79. Dairying |
| 35. Box Factory Foreman | 80. Dyeing |
| 36. Bee Keeping | 81. Dentistry |
| 37. Broom Making | 82. Drafting |
| 38. Basket Making | 83. Die Polishing |
| 39. Blacksmithing | 84. Estimating and Plan Reading |
| 40. Book Illustrating | 85. Electric Light Station Operator |
| 41. Butter Making | 86. " " Wiring |
| 42. Butchering | 87. " " Meter Mechanic |
| 43. Building Inspector | 88. " Sub-station Operator |
| 44. Baking | 89. " Fixture Making |
| 45. Book-binding | 90. " " Assembling |
| | 91. " " Repairing |
| | 92. " Engineering |
| | 93. " Welding |
| | 94. " Winding |

95. Electric Switch Board Operating
96. " Wiring
97. Electrician
98. Embalming
99. Engraving
100. Farm Mechanics
101. " Carpentry
102. " Machinery Repairs
103. Floriculture
104. Fruit and Vegetable Drying and Canning
105. Fur Cutting
106. Farrier
107. Furniture Polishing
108. Farm Traction Operator
109. Factory Clerk
110. Forestry
111. Fancy Wire Work
112. French Polishing
113. Flour Milling
114. Fire Insurance Agent
115. Fountain Pen Maker
116. Greenhouse Work
117. Gas Engineering
118. Glass Cutting
119. Garment Designing
120. " Cutting
121. Grain Buying
122. " Elevator Operator
123. Glove Weaving
124. Gardening
125. Grain Inspector
126. Gas Tractor Engineer
127. Glove Making
128. Gunsmithing
129. Gold Pen Making
130. Hat Blocking
131. " Making
132. Highway Engineering
133. Hydro Inspector
134. Hardware Salesman
135. Hospital Technician
136. Harness Making
137. " Fitting
138. Horticulture
139. Heating Plant Operator
140. Hog Raising
141. House Painting
142. Harness Repairing
143. Interior Decorating
144. Iron Moulder
145. Jeweler
146. Jewelry Repairs
147. Janitor
148. Joiner
149. Knitting Machine Operator
150. " " Repairing
151. Life Insurance Agent
152. Locksmith
153. Log and Lumber Scaling
154. Landscape Gardening
155. Lens Grinder
156. Leather Novelties Manufacturing
157. Lead Glazing
158. Linotype Operator
159. Lithographing
160. Law Course
161. Librarian
162. Medicine
163. Meter Reading
164. Metal Pattern Maker
165. Metal Spinner
166. Marble Cutting
167. Mechanical Drafting
168. Machine Shop Practice
169. Motor Mechanic
170. Milling and Assaying
171. Mining Engineering
172. Monotype Casting
173. Milk Testing
174. Metal Polishing
175. Moving Picture Operator
176. Mining
177. Machinist
178. Mechanical Dentistry
179. Metal Enamelling
180. Moving Picture Photographer
181. Meter Construction
182. Massaging
183. Mechanical Engineering
184. Magneto Repairs
185. Multigraph Operator
186. Marine Engineering
187. Meat Inspector
188. Municipal Secretary
189. Machine Buttonhole Work
190. Metal Drill Work
191. Mattress Making
192. Machine Wood Work

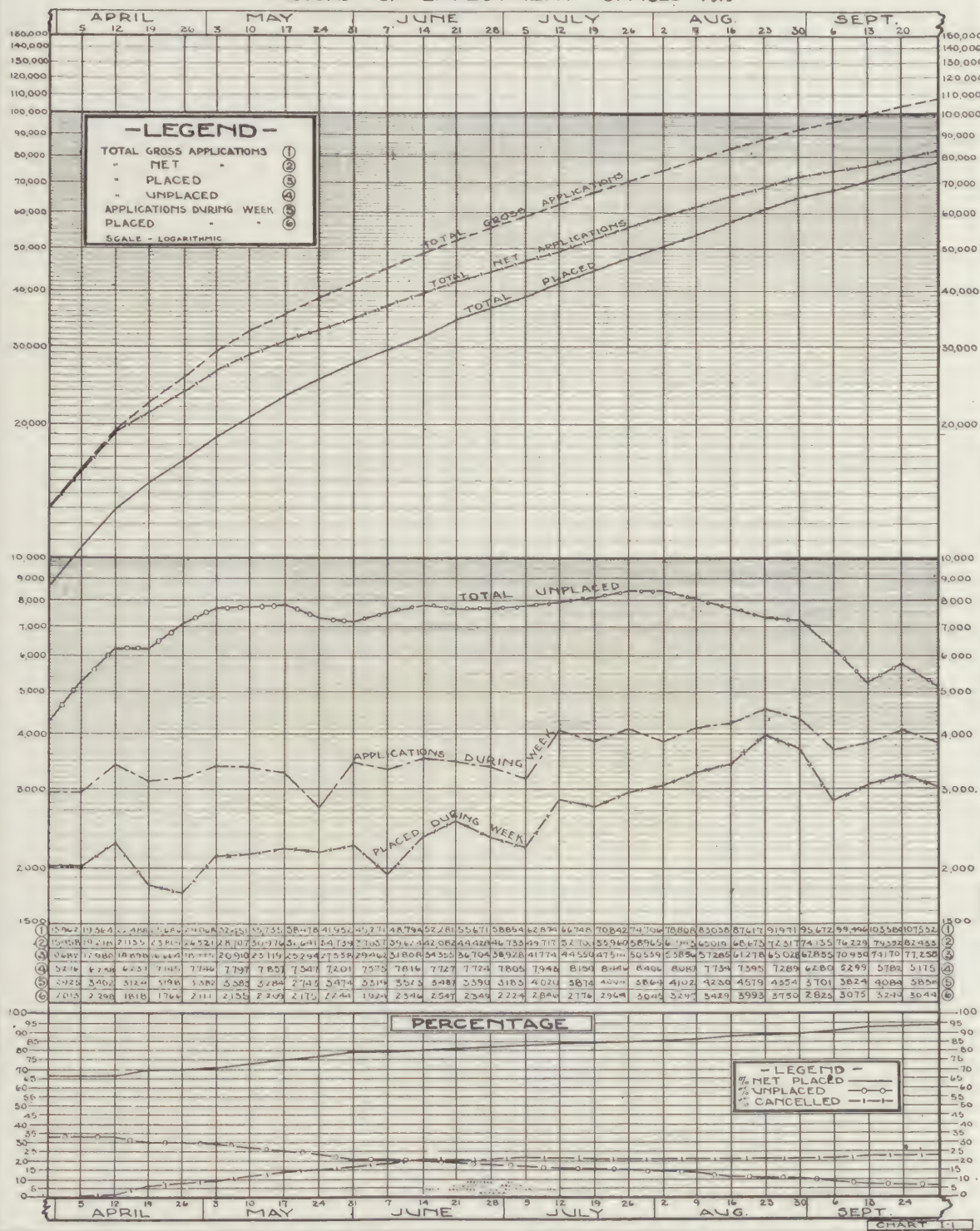
193. Navigation
194. Naval Architect
195. Nautical Instrument Repairs
196. Office Equipment Repairs
197. Optical Work
198. Oxy-acetylene Welding
199. Ornamental Iron Work
200. Orthopædic Boot Making
201. Ocean Cable Telegrapher
202. Photography
203. Poultry Raising
204. Printing
205. Plumbing
206. " Supplies Assembly
207. Pharmacy
208. Piano Tuning
209. " Polishing and Finishing
210. " Repairs
211. " Sounding Board Manufacturing
212. " Hammer Making
213. Picture Framing
214. Paper Box Making
215. Prosthetic Dentistry
216. Power Plant Engineering
217. Pattern Making
218. Pressman
219. Photo Engraving
220. Pressed Metal Work
221. Paper Hanging
222. Pickle Making
223. Paper Novelty Manufacturing
224. Rubber Turning
225. Railway Clerk and Accounting
226. Ring Making
227. Radiographing
228. Railroad Station Work
229. Rubber Tire Repairing
230. Reed Furniture Making
231. Railroad Track Inspector
232. Reporting
233. Railway Drafting
234. Shoe Making
235. " Cutting
236. " Repairing
237. Sheet Metal Work
238. Stencil Cutter
239. Steel Analysis
240. Scientific Course
241. Steam Engineer
242. Switch Board Operator
243. " " Installing
244. Stenography
245. Shipping Clerk
246. Stone Drafting
247. Steel and Cement Construction
248. Soldering
249. Street Car Repairs
250. Surveying
251. Steam Boiler Inspector
252. Silversmith
253. Stationary Engineering
254. Sign Painting
255. Sewing Machine Repairs
256. Ship Building
257. Steel Stamping
258. Silver Polishing
259. Steel Letter Cutting
260. Sign and Card Writing
261. Storekeeper
262. Sanitary Inspector
263. Seed Inspector
264. Stamp Making
265. Stove Moulding
266. Saw Filing
267. Steam Fitting
268. Ship Drafting
269. " Fitting
270. Sheet Metal Drafting
271. Stationery Salesman
272. Stone Planer
273. Sash and Door Manufacturing
274. Scale Repairs
275. Slaughtering Animals
276. Saxophone Playing
277. Salesmanship
278. Sheep Herding
279. Surgical Appliance Manufacturing
280. Tinsmithing
281. Tile Setting
282. Tool Making
283. Taxidermy
284. Telegraph Cable Splicing
285. Time Keeping
286. Telegraphy
287. Telephone Installation
288. " Repairs
289. " Lineman
290. Typesetter

- | | |
|-------------------------|------------------------------------|
| 291. Truck Gardening | 303. Vulcanizing |
| 292. Theology | 304. Veterinary Work |
| 293. Tailoring | 305. Watch Repairing |
| 294. Typewriter Repairs | 306. Veneer Lathe Operating |
| 295. Touch Typing | 307. Window Dressing |
| 296. Trunk Making | 308. Wire Cable Making |
| 297. Trap Drummer | 309. Wooden Shoe Making |
| 298. Teachers' Course | 310. Wood Carving |
| 299. Upholstering | 311. Wireless Telegraphy |
| 300. Undertaking | 312. Wood Polishing |
| 301. Veneering | 313. Wire Bed Spring Manufacturing |
| 302. Violin Playing | 314. X-Ray Operating |



RE-TRAINING IN INDUSTRIES. LEARNING HARNESS MAKING IN A MONTREAL SHOP.

DEPARTMENT OF SOLDIERS CIVIL RE-ESTABLISHMENT
— INFORMATION AND SERVICE BRANCH —
RECORD OF EMPLOYMENT OFFICES - 1919



Information and Service Branch

By Major L. L. Anthes,
Director, Information and Service Branch.

The Information and Service Branch of the Department of Soldiers' Civil Re-Establishment was brought into being subsequent to the date of the Armistice of November 11, 1918. Major L. L. Anthes, a manufacturer, and Chairman of the Canadian Manufacturers' Association, Toronto, together with Mr. T. A. Stevenson, Secretary-Treasurer of the Toronto Trades and Labour Council, were called to Ottawa to consult with the department as to ways and means of re-establishing the demobilized soldier (other than those specifically provided for owing to disability) in industry and general employment. A separate branch of the Department of Soldiers' Civil Re-Establishment was then created to carry out this work, this branch being named the Demobilization Branch, the name of which was later changed to the Information and Service Branch. Major Anthes and Mr. Stevenson accepted the positions of Director and Assistant Director, respectively.

The question of re-establishing the demobilized soldier was thoroughly discussed with the Repatriation Committee, under the direction of Mr. H. J. Daly, Director of Repatriation. After an exhaustive study of the problem, the Repatriation Committee outlined the procedure for finding employment and bringing the demobilized soldier into contact with employment opportunities. This procedure was put into operation under the Employment Offices Co-ordination Act, an Act for the establishment

of Employment Offices throughout Canada, such employment offices to come under the administration of the Provincial Governments, and under the supervision of the Federal Department of Labour. It was decided to develop the scope of these offices and to use them as a medium for finding employment for the returned soldier.

Provision was made whereby one or more representatives of the Information and Service Branch of the Department of Soldiers' Civil

Re-Establishment would be given space in these employment offices, the duties of the representatives being to meet all returned soldiers applying at these offices, and obtain for them preference in all opportunities of employment offering. Furthermore, these representatives of the Department of Soldiers' Civil Re-Establishment were in a position to direct any soldier applicant to the nearest office or offices which had to



INTERIOR VIEW OF THE EMPLOYMENT OFFICE CONDUCTED BY
THE INFORMATION AND SERVICE BRANCH AT
186 WINDSOR STREET, MONTREAL.

deal with specific benefits provided by legislation for the demobilized soldier; in short, whatever information was desired, or problems presented, a representative of this department was in a position to direct the applicant along the proper channel for obtaining the requisite service. Needless to say, with the sudden problems of demobilization facing Canada, it was necessary to considerably extend Dominion-Provincial Employment machinery, and when it is realized that at the time of the Armistice there were only twelve Dominion-Provincial

Employment offices in operation, and that there are now ninety-five extending throughout Canada, from coast to coast, some idea may be gathered of the extent of organization work necessary to accomplish this. During the first quarter of this year, much of the effort of the Information and Service Branch was directed to the establishing of these employment offices.

The activities of the Information and Service Branch are directed from the head office at 130 Queen Street, Ottawa. In each unit, which roughly corresponds to each military district, there is a Unit Service officer, who is responsible for the administration of the work of the Information and Service Branch throughout his unit, and who is in turn responsible, and reports to, the director at the head office in Ottawa. The various representatives of this branch, in the employment offices, come under the Unit Service officer, and report through him to the head office at Ottawa.

In order to see that demobilized men who had been placed in employment had become permanently established, a very thorough follow-up system has been introduced by the branch, which has given excellent results in re-establishing the returned man in permanent employment. Special attention is being given to men who are inclined to change their employment repeatedly, with a view to ascertaining the reason of this restlessness, and to prevent men from becoming what is commonly known as "Problem Cases." In the city of Toronto, where there are more demobilized men than in any other centre in Canada, a handicap section has been opened, which is concentrating on those men who, through disability or other causes, are unable to take ordinary occupations. With the development of the Toronto department in this work, similar departments will be opened up in other large centres.

Another class which presents some difficulty in re-establishment, is the business and professional man who finds it particularly hard to re-establish himself, owing to the loss of business connections during his service in France. A special section, called the Professional and Business Section, has been opened up

in each of the large cities in Canada, for the purpose of assisting the many young engineers, business and professional men to obtain employment in their respective specialized lines.

During the period of demobilization, staffs were maintained at all dispersal areas, for the purpose of giving each soldier specific information as to the activities of this department. These dispersal area staffs came under the direction of the Unit Service officer, who was thus kept posted as to the number of men to be provided for within his area.

Up to the week ending September 13, 1919, there were placed in employment, through the employment offices, 72,185 demobilized soldiers; representing 91.05 per cent of all applications for employment. The number of enquiries answered by our representatives in the employment offices, which includes the dealing with special cases, amounted to 388,711 up to the end of September 13, 1919.

In order that the Information and Service Branch might become possessed of the fullest information possible regarding the soldier about to be demobilized, questionnaire forms had been distributed overseas, from Ypres to the Vosges Mountains, from the Rhine to the English Channel, and throughout England and Scotland. These questionnaires were completed and returned to Canada, so that by March 1, 1919, a record of each man, comprising his regimental number, rank, unit, whether married or single, age, place of residence in Canada, dispersal area selected for discharge, occupation prior to enlistment, occupation desired on demobilization, past experience in that occupation, and various other items, was available for the representatives of this branch throughout the twenty-two dispersal areas in Canada. When these questionnaires arrived in Canada and had been thoroughly tabulated at the head office in Ottawa, the organization of the branch had practically been completed throughout Canada, and was ready to take advantage of the information that was supplied through these questionnaires towards aiding the speedy re-establishment of the demobilized soldier.

EMPLOYMENT & INFORMATION STATISTICS

Cumulative to November 30, 1919.

Unit or District	*Net Applications	Placements	Percentage	Enquiries Answered
Prince Edward Island.....	781	749	95.6	4,218
Nova Scotia.....	3,223	2,965	91.9	14,094
New Brunswick.....	4,863	4,675	96.1	14,344
Eastern Quebec.....	2,203	2,119	96.1	10,230
Western Quebec.....	12,529	11,550	92.1	47,101
North-Eastern Ontario.....	3,983	3,796	95.3	27,909
South-Eastern Ontario.....	3,545	3,487	98.3	43,540
Central Ontario.....	18,463	17,706	95.8	121,054
Western Ontario.....	8,416	8,373	99.4	27,706
New Ontario.....	3,213	3,207	99.8	9,206
Thunder Bay.....	1,752	1,739	99.2	6,175
Manitoba.....	9,608	8,944	95.1	109,827
Saskatchewan.....	5,410	5,100	94.2	40,747
Alberta.....	11,726	11,481	97.7	13,510
British Columbia.....	16,778	15,834	94.3	114,234
†CANADA.....	106,493	101,725	95.5	603,895
†Following is Canada Employment Total by Sections:				
General Section.....	102,818	99,035	96.3	
Professional and Business Section.....	3,185	2,354	73.4	
Handicap Section.....	490	336	67.3	
	106,493	101,725	95.5	

*Less Cancellations.



INTERIOR OF A TYPE OF RECREATION BUILDING BUILT AT DEPARTMENT OF SOLDIERS' CIVIL RE-ESTABLISHMENT HOSPITALS.



TENNIS COURTS AT SOLDIERS' CIVIL RE-ESTABLISHMENT HOSPITAL—STANDARD WARDS IN BACKGROUND.

Chief Inspector's Branch

By Major C. G. Arthur, D.S.O.,

Chief Inspector.

Previous to the taking over of the Military Hospitals Commission by the Department of Soldiers' Civil Re-Establishment and of its sub-branch, the Military Hospitals Commission Command, by the Department of Militia and Defence, all patients in Institutions were under military discipline. As a number of these institutions were to be taken over by the Department of Soldiers' Civil Re-Establishment, it was deemed advisable to create a disciplinary organization which would be responsible for the discipline of ex-soldiers while undergoing treatment by the Department.

A Commandant's Branch was therefore formed and a Commandant appointed. He was empowered to make such rules and regulations as he deemed necessary to insure proper discipline within the institutions controlled by the Department. While the primary duties of the Commandant were of a disciplinary nature, additional duties were added which included the keeping of records, issuing of pay and allowances, transportation, clothing of patients and numerous other matters pertaining to their personal care and welfare, which did not directly affect the medical services.

In each Departmental Unit was placed a Deputy Commandant who was responsible to the Commandant at Ottawa. In each Institution either controlled or used by the Department, whenever found advisable, a Commandant's Representative was installed, responsible to the Deputy Commandant of the Unit in respect to all matters of discipline, records, issuing of daily reports and any other duties which might be allotted to him from time to time by the Deputy Commandant. Great care had to be exercised in the selection of these Officers, it being necessary to have returned soldiers who would be able to appreciate the view-point of the returned men, and would act as their friends, and assist them in every possible way in settling their troubles.

Under the Military Hospitals Commission Command, a Police Staff was maintained at all

Institutions, but on the control of these Institutions being assumed by the Department of Soldiers' Civil Re-Establishment, all Military Police were dispensed with, and an endeavour was made, as far as possible, to maintain discipline more by personal touch and influence than by the method of imposing fines and punishments. This has worked out most satisfactorily, and offences committed by men undergoing treatment are practically nil.

In the latter part of 1918 this method had proved so generally successful that it was decided to eliminate the military term "Commandant." The Branch is now known as the Chief Inspector's Branch. The administration of the Branch in the Units is carried out by the Assistant Directors, who in this respect are responsible directly to the Chief Inspector.

RECORDS

Records of men who come on the strength of the Department for treatment are kept up-to-date by a system of daily reports received from each Unit. All documents which may be required regarding a man's previous history are now being obtained through the Records Branch of the Department, which by arrangement with the Department of Militia and Defence has an Officer installed in the Record Branch of that Department.

PAY AND ALLOWANCES

The daily report issued by each Unit is the official means of placing men on pay and allowances.

Early in the history of the Department, it was found that the only just way of determining pay and allowances for men while undergoing treatment was that they should receive the same pay and allowances as they had formerly been receiving under the Department of Militia and Defence or the Department of the Naval Service, and an Order in Council was therefore passed (P.C. 1366, 1918) authorizing this Department to make payments as above indicated. This Order was superseded by P.C. 387, 1919.



ASSEMBLY ROOM AT NINETTE SANATORIUM.



A CLOTHING STORE. VIEW OF CLOTHING STORE AT MONTREAL, WHERE PATIENTS AND VOCATIONAL STUDENTS MAY BE OUTFITTED AT MODERATE COST.

Arrangements have also been made whereby the Branch will pay payments of war service gratuity to men discharged from this Department who were transferred direct from the Department of Militia and Defence for further treatment.

CHAPLAIN'S SERVICES

The Chaplain's Service Branch, organized in the early part of 1919, under the general direction of Chaplain Service, Department of Militia and Defence, is another link of the Department which is rendering valuable service, to provide spiritual ministrations and visiting care for the sick and convalescent.

In addition, however, through their personal contact with the men, both in hospitals and homes, the visiting chaplains are enabled to achieve a substantial amount of social service, and also to strengthen and uphold the ideals of true Canadian citizenship by encouraging the returned men to oppose all that is unloyal to constituted authority.

The work of this branch is planned upon broad and democratic lines; wherever they are stationed the D.S.C.R. chaplains are found to co-operate with every social agency that will bring cheer and assistance to the returned man, and thus many treats come the way of the men which might otherwise be missed.

In many units chaplains provide games and organize clubs and sports centres; they also frequently act as intermediary between the returned man and the various departments or patriotic organizations providing assistance and relief.

There is a chaplain stationed in every unit, and the work being of a personal nature comes under the Personal Service Division of the Chief Inspector's Branch at Ottawa.

CLOTHING

The question of clothing for men taken on strength for treatment had to be given special attention, and a quantity of clothing was therefore purchased. The men are given the privilege of obtaining such clothes as they desire on the repayment plan. By this means, a complete outfit can be issued, with the exception of an overcoat, for \$35.00, the amount of the clothing

allowance made by the Department of Militia and Defence on a man's discharge.

This arrangement has worked out so satisfactorily, that the same privileges are now granted to students taking vocational training. Clothing is also issued free of charge to the members of the forces who are in need of same, and who are undergoing medical treatment in institutions for a lengthy period.

TRANSPORTATION

Transportation for the Department had been handled by the Chief Inspector's Branch, by books issued through the Department of Militia and Defence but signed by officers of the Department of Soldiers' Civil Re-Establishment, the Department of Militia and Defence paying the account and in turn being reimbursed by the Department of Soldiers' Civil Re-Establishment. This arrangement, although satisfactory to a certain extent, was not all that could be desired, and negotiations were entered into with the Canadian Railway Passenger Association whereby a satisfactory working basis was arrived at, in that the Department of Soldiers' Civil Re-Establishment now issues its own transportation and freight warrant books. This procedure provides direct control with regard to issuing of warrants and direct payments of accounts.

INSANE

Owing to the necessity of properly protecting the interests of the insane ex-members of the forces, and the payment of allowances to their dependents, it was found advisable for this Department to assume the complete control of the situation so far as these men are concerned.

Each case has been gone into thoroughly and a special representative has been appointed in each Unit to visit insane patients once every two weeks, and also investigate the circumstances in which dependents are living. If a patient is in need of clothing or other small necessities these needs are attended to at once on the report of the visitor.

Every means has been taken to reduce expenditure without impairing the efficiency of the Branch.



DINING-ROOM OF A DEPARTMENT OF SOLDIERS' CIVIL RE-ESTABLISHMENT HOSPITAL.



A WARD KITCHEN IN MANITOBA SANATORIUM, NINETTE, SHOWING THE INDIVIDUAL TRAYS FOR THE PATIENTS.

The Dietary Branch

By Miss V. M. Ryley,
General Organizing Dietitian.

In the administration of a hospital the provision of suitable food is second only to efficient medical and surgical treatment, as without it the latter fails to secure adequate results.

The military system of rationing patients in hospitals was adopted by the Military Hospitals Commission, until it was found that a large amount of unnecessary waste resulted and that the meals were not as appetizing as they should be for invalids. It was decided, therefore, to ask the Head of the Household Science Department of the University of Toronto to prepare menus covering a thirty-one day month, providing for the proper number of calories, but the following objections were pointed out:—

1. Definite menus do not permit the hospital to take advantage of local markets or foods available only at certain seasons in the year.

2. A menu means little; the chief thing is how is the food prepared. For example—bread pudding is delicious when well prepared, but very unattractive if made as most cooks prepare it—so with many other foods. Who would oversee the preparation of this specified menu?

3. Even if the food were cooked correctly, who would see that it was served properly, hot or cold, in correct quantities and attractively?

4. What about the food served to patients on special diets, where a doctor's prescription must be followed? Who would be responsible for preparing this scientifically?

After fully discussing the above questions, it was decided to install dietitians for the following reasons:—

1. Economic.
2. Æsthetic.
3. Scientific and medical.

I. ECONOMIC REASONS

(a) *Selection of the Menu.*—A capable dietitian will save a large institution thousands of

dollars in a year by wise and intelligent menu building. She will select foods which give good results from a nutritive and æsthetic standpoint, but are reasonable in price; cheaper foods can be served frequently by being prepared in a variety of ways.

(b) *Supervision of the Preparation of Food.*—Large sums of money can be saved by seeing that all foods sent to the kitchen are prepared or cooked according to the finest methods.

(c) *Supervision of the Service.*—This is equally important with (a) and (b), as hundreds of dollars can be saved by seeing that moderate helpings are served. This does not mean stinting, as all are welcome to second servings, but the elimination of waste; for example, thickly carved meat is less attractive but uses more meat—a slice 20% thinner on a \$2,000 meat bill would mean a saving of \$400. Often if a good carver leaves and is replaced by an inexperienced man a meat bill will rise several dollars a day until the new man is trained to carve to advantage.

(d) *Saving in the Number of Employees Required.*—An efficient dietitian will usually run a large dietary department with less help than when a department is managed by an inexperienced superintendent who has not been trained to make out a work plan to conserve labor.

(e) *Elimination of Waste.*—Elimination of waste in every respect, whether waste in food, waste in service, waste in fuel, or waste in other supplies.

II. ÆSTHETIC REASONS

Aside altogether from the important economic reasons, a competent dietitian will see that the meals are attractive, selecting pleasing combinations, securing variety, having food well flavored, and seeing that it is served at the right temperature—either hot or cold.

In trying to build up the constitution of a person who is below par, one of the chief objects



DINING ROOM AT MOWAT SANATORIUM.



A STANDARD KITCHEN LAYOUT.

should be to tempt his appetite by appealing both to his eye and sense of taste. It will not matter how nutritive or necessary a food may be, the patient may refuse to take it unless he enjoys it—in commercial life the successful restaurant manager depends very largely upon attractive appearances to increase his sales, and make his business a success.

A competent dietitian is worth her entire salary for æsthetic reasons alone. Who can estimate in money what it means to have:—

- (a) Hot foods served hot and on hot plates;
- (b) Cold foods served cold and on chilled dishes;
- (c) Gravies, soups, sauces and in fact all foods properly seasoned and flavored;
- (d) Foods served in moderate quantities, attractively spaced on the plates instead of being "splashed on."

These items may not figure in the cost report but make the difference between first-class and third-class meals.

III. SCIENTIFIC AND MEDICAL

A healthy person may digest foods prepared in a manner which would be quite dangerous for a person who is not well. The scientific and medical reasons for installing a dietitian are the greatest, and so well known that a brief mention only is required.

The whole or main part of the treatment of several well-known diseases of metabolism is by diet; for example, in diabetes or nephritis the very life of the patient may depend upon a special diet to suit the disease.

In fevers and tuberculosis, the importance of suitable diet cannot be overestimated.

The dietitian follows the doctor's prescription in these cases, but often the doctor gives only a general outline of the diet he wishes given, leaving the dietitian to fill in the details; that is, she must have a thorough knowledge of:

1. Food values and nutrition.
2. Diet in disease.
3. Methods used in invalid cookery.
4. How to follow a doctor's diet prescription.

In all cases, whether diseases of metabolism or others, the dietitian must consider:

(a) *Digestibility of Foods*.—Certain foods may be harmful or the opposite, depending upon the method of preparation. The dietitian issues instructions covering this point.

(b) *Correct Balance between Protein and other Food Principles* which is essential to growth and welfare.

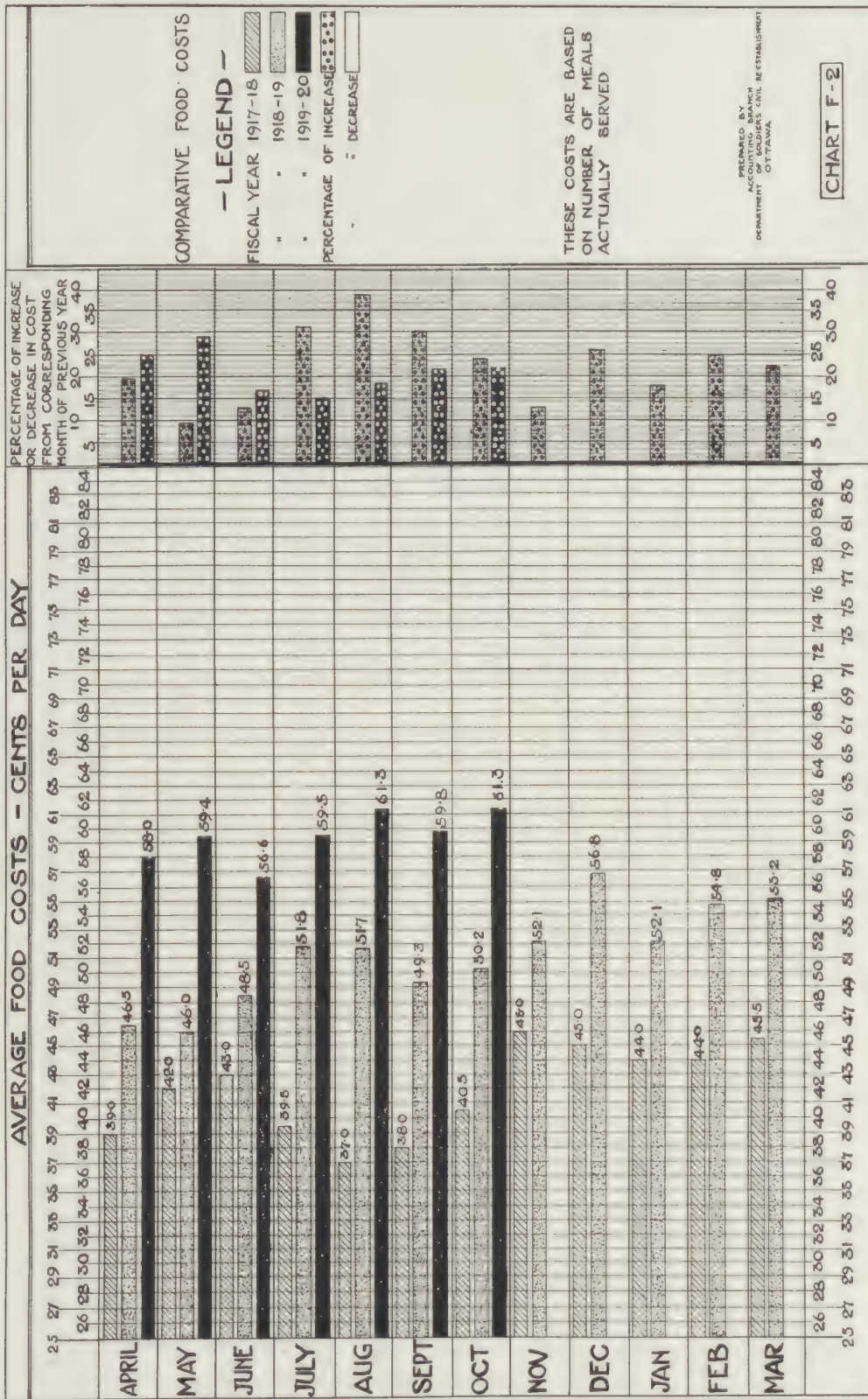
(c) *The Caloric Value of the Diet*, so that she can estimate and see that the proper amount of nourishment is being given.

In January, 1917, Miss Laird of the Household Science Department of the University of Toronto compiled the dietary ration table now used by the Department of Soldiers' Civil Re-Establishment, with the assistance of several members of the staff, based in part on the results of experiments made at the University of Toronto dining hall. This table is of great assistance, enabling a dietitian to order approximately the quantities required and also to furnish her cook with an accurate recipe.

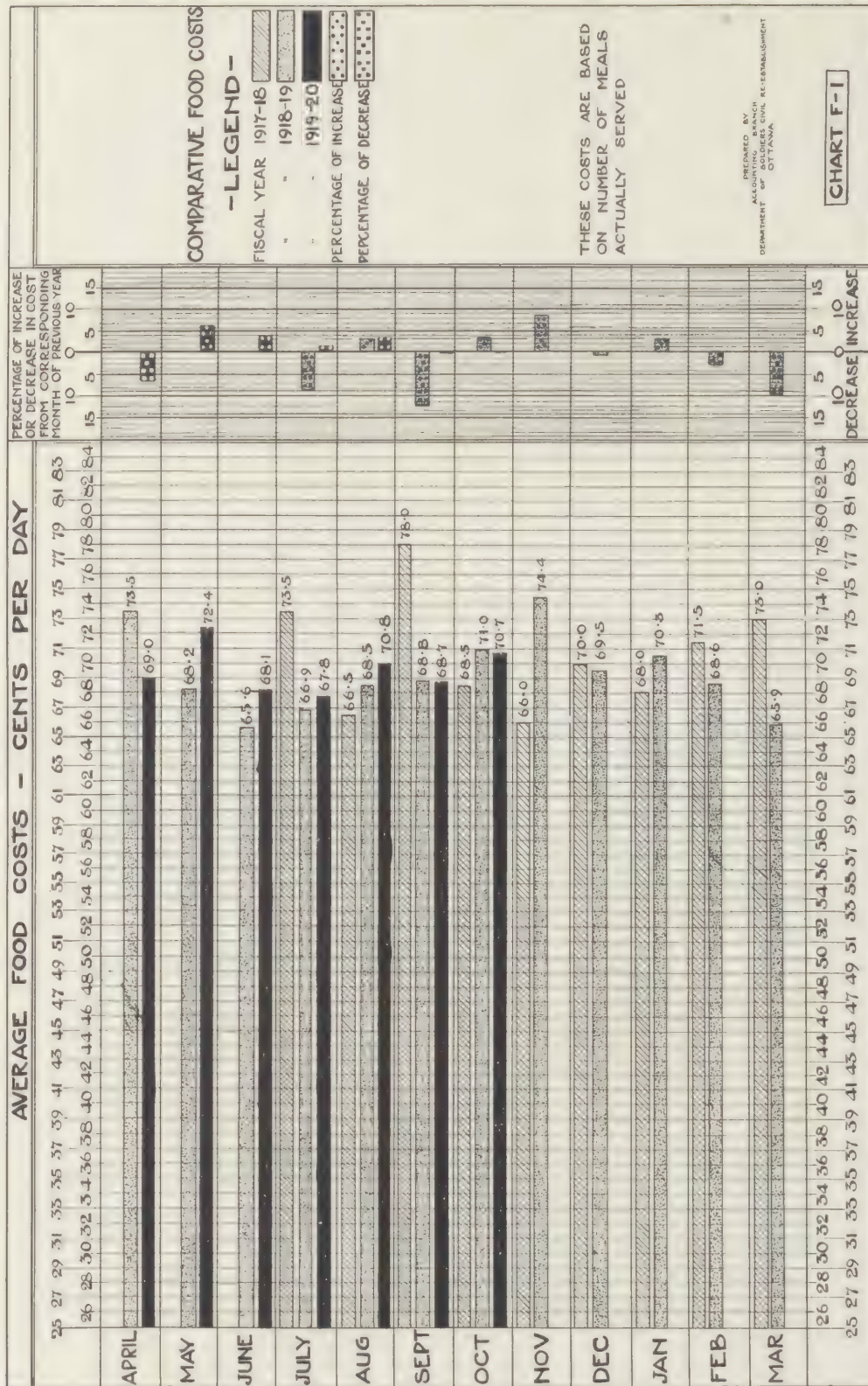
If a dietitian's work is to be effective she must be placed in full authority over the kitchen and dining room help and must receive the moral backing and support of the Superintendent of the institution. Detailed returns are furnished by dietitians to the General Organizing Dietitian on the consumption of the various articles and service of meals, including total costs and cost per meal; also records of losses through wear and tear in equipment, silver, linen and china. These returns are tabulated and are forwarded to the Head Office for comparative purposes. It is thus possible to check the quantities consumed in one institution by those consumed in others, and to see that the correct proportions of protein and other essentials to a well-balanced diet are supplied. The costs necessarily vary according to the location of the hospital and to whether the diets are general or special. In a tuberculosis sanatorium, where large quantities of milk, eggs and butter are consumed, the cost is higher per capita than in a convalescent hospital.

The economy achieved under a scientific dietary service may be illustrated by a reference to the fact that prior to the transfer of the

DEPARTMENT OF SOLDIERS CIVIL RE-ESTABLISHMENT -- HOSPITALS --



DEPARTMENT OF SOLDIERS CIVIL RE-ESTABLISHMENT - SANATORIA -



principal hospitals of the Military Hospitals Commission to the Department of Militia and Defence, an increase or decrease of one cent per meal resulted in a variation in expenditure of \$2,000 per week, or over \$100,000 per annum.

There is a shortage of capable dietitians. There are enough graduates in household science, but not all possess natural ability as executives or are fitted for this type of work. To assist in training promising graduates and so to save the Department the experience of having to try out each applicant appointed to a position, the system of training pupil dietitians has been instituted. Graduates give their services for four months—really doing post-graduate work—for their expenses, thus obtaining training but equally benefiting the hospitals.

The Dietary Branch of the Department

welcomes comparison with other hospitals in respect of cleanliness, quality of food, and superiority of service, and it is believed that such a comparison will demonstrate the absolute value of the scientific system it has organized.

AVERAGE COST OF MEALS PER PATIENT PER DAY
IN HOSPITALS AND SANATORIA OPERATED BY THE
DEPARTMENT.

General Treatment Hospitals—	Cents.
1917-1918.....	42
1918-1919.....	51.3
1919-1920 (to August 31, 1919).....	59
Tuberculosis Sanatoria—	
1917-1918.....	70.5
1918-1919.....	69.3
1919-1920 (to August 31, 1919).....	69.7



INTERIOR OF KITCHEN AT SPEEDWELL HOSPITAL, GUELPH, ONTARIO.

The Engineering Branch

By J. H. W. BOWER, B.A.Sc.,

General Superintendent Engineering Branch

The general considerations which led to the policy of establishing a chain of hospitals has been reviewed at some length in previous chapters of this work.

The effectiveness of the policy so established largely depended upon the rapid design and construction of the institutions proposed.

It was realized that this problem was one without precedent in the history of Canada, and that its actual working out must be one of experimentation. At the same time, the experimental stage could not prolong itself into a period of months or years, as the necessities were of an immediate nature, due to the rapid return of disabled members of the Canadian Forces from overseas. The Engineering branch of the Department was, therefore, immediately organized to take care of the work, in order that a central control within the existing organization might handle the many and varied problems that had to be faced.

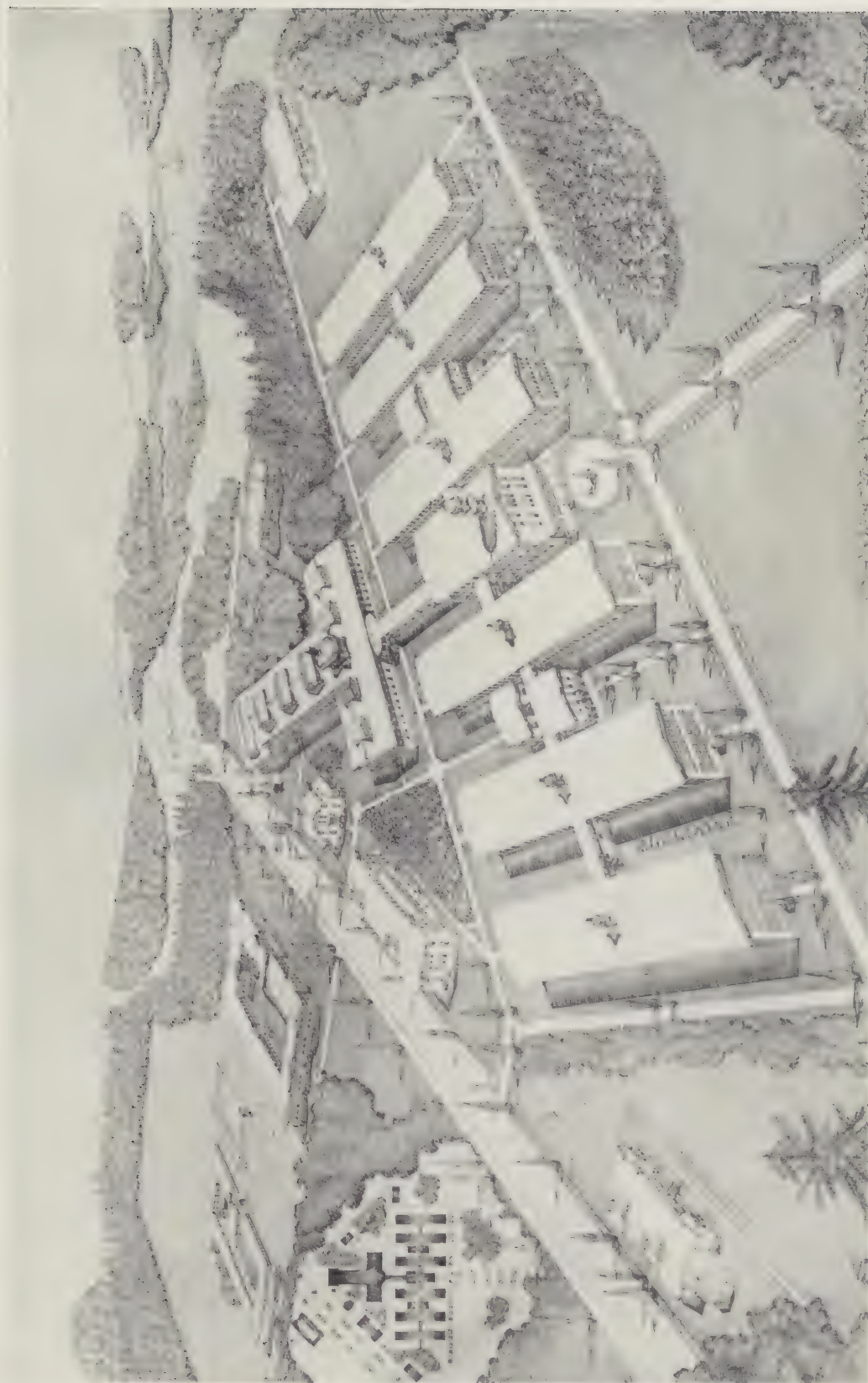
This branch of the work came into being during the Fall of 1916, and the success of its work is acknowledged by experts from other countries who have inspected the various institutions throughout Canada.

In Europe, hospital facilities became an immediate necessity at the commencement of hostilities. It may, therefore, be imagined that the large institutions erected for war purposes in France and England would form concrete examples of what should be followed in Canada. By the time the Department was faced with the hospitalization problem, plans and reports from war hospitals in France and England were available. These were surveyed in every detail, but it was found that climatic conditions in Canada prevented the very temporary type of structure from being used in this country. The type of structure generally used throughout England for war purposes, consisted of the lightest one-storey frame construction. The

temperate climate of England and France made it unnecessary to have elaborate and complete heating systems installed, and for the same reason, the structural details of their buildings could be of the most temporary nature, provided the general inclemencies of the weather could be guarded against.

The climate of Canada being subject to great extremes, especially in Winter, made it necessary that the institutions which were to care for sick and wounded men must be so constructed that they could be easily and economically heated. At the same time, it was realized that the Government could not justify the construction of institutions of a permanent nature, as a great many of the hospitals erected would only be in use for a comparatively few years.

Thus, the problem which confronted the Department was a unique one without precedent. On the one hand, the usual type of hospital was out of the question, due to its high constructional cost. On the other hand, the purely temporary building was useless, due to the extreme climatic conditions encountered. An intermediary course was, therefore, adopted, and buildings were constructed along lines that might be termed "semi-permanent." It was found that buildings of this nature could be most economically constructed of two-storey heights. Generally speaking, the foundations of the buildings consisted of wooden or concrete posts, supporting a floor system designed to meet the proper loads. The walls of the superstructure were composed of studding, sheeted inside and out with T. & G. Boarding, the interior and exterior sheeting being covered with two-ply of heavy building paper, and the finished interior surface being of some fire-resisting board, such as Linabestos, Gypso Fibre Board, etc. The exteriors of the buildings were finished in stucco, applied to some such material as Stucco Board,



NO. 1.—A BIRD'S-EYE VIEW SHOWING IN A GENERAL WAY THE LAY-OUT OF CANADA'S LARGER WAR HOSPITALS. THIS IS PHOTOGRAPHED FROM THE ORIGINAL PLAN FOR ST. ANNE'S HOSPITAL, STE. ANNE DE BELLEVUE, P.Q.



NO. 2.—TWO STANDARD WARD UNITS AND OPERATING BLOCK ERECTED IN CONNECTION WITH TUXEDO HOSPITAL AT WINNIPEG.



NO. 3.—INTERIOR OF CONVALESCENT WARD AT TUXEDO HOSPITAL, WINNIPEG.



NO. 4.—VIEW SHOWING TWO STANDARD HOSPITAL BUILDINGS ERECTED AS EXTENSIONS TO THE ONTARIO HOSPITAL AT WHITBY.



NO. 5—A GENERAL PANORAMA VIEW OF ONTARIO HOSPITAL AT WHITBY.

Lath Board, Metal Lath, etc. The roofs of the hospital units were along the simplest lines possible.

The buildings, while having their general constructional members composed of inflammable materials, may be considered as being of the "slow burning" class. The interior walls and ceilings were composed, as has been noted, of fireproof materials which would materially resist the spread of a fire making a start within the building. The exteriors of the buildings, due to the stucco finish, were also fire resisting, the only wood visible being that of the window frames and cornice trims.

While it was possible, by the adoption of the semi-permanent type of structure, to keep costs to less than half that of modern hospital construction, in so far as the actual buildings were concerned, the same degree of economy could not be consistently followed with reference to Heating Systems. These had to be of such efficiency as would meet the extremes in climate encountered during the Canadian winters. It was, therefore, necessary to go through practically the same course in installing heating and power plants as would have been encountered in work of a permanent nature. In war hospitals constructed in countries of more temperate climates, stoves were largely used for heating purposes. It was contended by some, that a similar procedure could be followed in Canada, provided the buildings were properly constructed. Such practice was proven to be most impracticable, and it was definitely shown that taking into consideration the fire hazard, the discomfort to patients, and the coal consumption from operating so many units, the use of stoves would prove to be so uneconomical and dangerous in operation, that the installation of complete Heating Systems was easily justified.

The provision of sanitation, ablution facilities, and all those requirements peculiar and necessary in the operation of hospitals, falls, to a large extent, within the same class as that pertaining to the Heating System discussed in the previous paragraph. While great economy could be followed in the structural type of the building used, plumbing and ablution facilities had to be adequate and properly designed to

meet all conditions. It was necessary that all institutions erected be supplied with the most up-to-date hospital fixtures obtainable, in order that those operating the institution might be properly aided in giving effect to their professional skill. One step towards economy in this direction was possible, and resulted in enormous savings to the Department. In civilian hospitals usually erected, vitreous china fixtures of expensive patterns have been used. The price of these fixtures during the period of the War, doubled and trebled, and were, at the same time, almost impossible to obtain. By close co-operation with manufacturers of sanitary equipment, iron fixtures were designed, on which was used an acid-proof enamel. This enamel would not deteriorate from the use of strong acids generally in use in institutions of this kind. The costs of these fixtures were only a fraction of that of the usual type. Their present excellent condition is proof that their anticipated qualities have been realized.

The problem of food service in any institution is one which probably gives rise to more criticism by the patients than almost any other feature. In the war hospitals built in Canada, kitchen and dining-room lay-outs were considered and planned with the utmost regard to detail. Efficient and economic food service is largely dependent upon the dietary branch, having at its command complete and up-to-date facilities for food preparation. It has been demonstrated that the complete kitchen units provided have given a service second to none in the country. The installation of up-to-date equipment such as jacketed kettles, electrically driven apparatus, Hobart mixers, potato parers, dish washers, equipment for the making of ice creams, specially designed pastry ovens, batteries of toasters, and so forth, made it possible for those in charge to render such prompt and satisfactory service that, generally speaking, criticisms from the patients have been very noticeable by their almost entire absence.

One of the somewhat unique features connected with food service in Canadian war hospitals was the early adoption of up-to-date cafeteria systems, utilized by those patients in the institution who were well enough to serve



NO. 6.—INTERIOR VIEW OF RECREATION BUILDING AT ONTARIO HOSPITAL, WHITBY.



NO. 7 —A GENERAL VIEW OF THE KITCHENS OPERATED BY THE DEPARTMENT AT ONE OF ITS INSTITUTIONS



NO. 8.—ILLUSTRATES CAFETERIA SYSTEM USED IN CANADA'S WAR HOSPITALS.



NO. 9.—DINING-ROOM AT ONTARIO HOSPITAL, WHITBY.



NO. 10.—RECREATION ROOM AT ONE OF THE PERMANENT INSTITUTIONS ACQUIRED BY THE DEPARTMENT.



NO. 11.—A VIEW OF BOWLING GREEN AT NORTH TORONTO HOSPITAL. IN THE MIDDLE BACKGROUND IS THE ENTRANCE TO RECREATION BUILDING; TO THE RIGHT, THE LIMB FITTING DEPOT; AT THE LEFT, ENTRANCE TO THE SOLARIUM OF ONE OF THE WARD UNITS.

themselves. The cafeteria system was installed wherever possible, and it has met with unqualified success. The system was entirely satisfactory to the patients, and the saving effected by the reduction in the number of serving staff lowered the patient cost of food to a surprisingly large extent.

For those whose disabilities confined them to their bed, each ward was equipped with a complete diet kitchen. The main kitchen supplied food for the whole institution, and proper amounts were distributed to each diet kitchen by means of heated food trucks. The diet kitchens were properly equipped for the preparation of all special diets, and by the use of steam heated appliances, such as steam tables, etc., meals could be served at any specified time throughout the day.

Economic food service is largely dependent upon the purchasing of food supplies in large quantities. This policy was made possible by the installation of mechanical refrigeration operating large refrigerators in specially designed store-rooms.

Reference, in the foregoing part of this book, has been made to the wonderful work of the physician and surgeon during the war. Any professional skill can only obtain its greatest efficiency when properly aided by the most up-to-date appliances and general conditions. Operating Suites instituted in Canada's war hospitals were complete to the last detail. The major operating suite in an active treatment institution was designed to embody all necessary departments in proper relation to the operating theatre itself. Sterilizing equipment of proven efficiency was installed in every such unit. In short, every piece of equipment necessary to aid skilful work was incorporated in each lay-out. The same careful degree of thought was used in the planning and allocation of space for X-Ray Departments. Many features not usually encountered in this work were embodied in the plans, and the results obtained have proven their efficiency. Perhaps one of the features which may receive more special attention was the complete facilities afforded in certain of the institutions for the carrying on of Hydro-Therapy, Electro-Therapy

and Mechano-Therapy. It is doubtful if more efficient and complete departments of this nature exist in any of the civilian hospitals on this continent. Hydro-Therapy installations consisted generally of Continuous Baths, Arm and Leg Baths, Scotch Douche with Control Table, Steam Cabinets, and so forth. The Electro-Therapy branch of the work was equipped with every appliance proven to be of value in the treatment of certain disabilities. Considerable space and equipment was allocated for the use of the Massage Department, in order that the efficiently trained staff specializing in work of this nature might give full effect to their professional skill.

For the carrying on of special work, such as examinations in eye, ear, nose and throat disabilities, each institution requiring such facilities was equipped with complete clinics in each branch of the work. In many of the institutions, a great deal of out-patient work was carried on. Complete dispensaries for the filling of prescriptions were installed wherever required.

The foregoing remarks bear generally on the facilities which provided the necessary conditions for the furtherance of professional skill. The monotonous routine of institutional life must of necessity be broken by periods of recreation if the patient is to remain happy.

In the larger institutions constructed, recreation halls, equipped with apparatus of all kinds for mental and physical amusement, were erected. These buildings were usually of the two-storey type, the top floor being utilized for the showing of moving pictures and for use as an open gymnasium for the benefit of those whose physical condition would permit them to indulge in such pastimes. The basement, or ground floor, of the recreation hall was usually equipped with billiard tables, bowling alleys, canteens, barber shops, libraries, reading rooms, and so forth. The theatre portion of the building was so arranged, with stage and curtain, that amateur or professional theatricals could be properly staged at any time. These excellent recreation facilities had a wonderful effect on maintaining that proper degree of happiness



No. 12.—OPERATING THEATRE, NORTH TORONTO HOSPITAL.



No. 13.—TOILET AND ABLUTION ROOM, NORTH TORONTO HOSPITAL.

among the patients which is so necessary to the well-being of one who is undergoing treatment.

The progressive policy of the Government in re-training disabled men for new occupations has already been discussed in detail in a previous chapter. The activities of the Vocational Branch of the Department could not be made effective until such time as buildings were available in which to carry on academic courses and industrial re-training. In practically every city in Canada of any size, re-training classes were established on a large scale, and the work of providing accommodation for this work entailed considerable constructional activities.

In some places, vacant factories were procured and their whole interior remodelled to suit the conditions required. In other instances where existing buildings were not available, new structures had to be designed and erected, and considerable care and forethought was expended in making these suitable in every regard for the re-training of disabled men. This work did not, of course, call for so much original thought as that required in the design of hospitals, but speedy execution of the construction of new buildings and the alteration of those acquired was necessary in order that the work might go forward as rapidly as possible.

The pulse of an institution is centred in its power-house. As already mentioned herein, a central plant was employed in supplying heat, light and power to institutions which were erected. The central power-house was not only used for the supplying of heat, but very often where local rates made the procuring of electricity prohibitive, steam generating sets were installed and the institutions supplied with power and light. Included in the power-house lay-out was usually incorporated complete machinery for refrigeration which operated all cold storage rooms throughout the institution. In large institutions, where justified, complete laundry units were erected to take care of the hospitals' requirements.

The work of the hospital programme laid out may be roughly divided into two groups; first: the provision of general hospital facilities which includes accommodation for convalescent and

active treatment cases; the second natural division is that relating to the provision of hospitals for the treatment of those ex-members of the Forces suffering from tuberculosis.

In the general hospital group, and distributed in proper relation amongst accommodation for convalescents and active treatment cases, comes the provision of accommodation for incurables, mental defectives, neurological types, and those cases requiring special treatment under special conditions.

Referring to those institutions which were erected in their entirety by this Department, Illustration No. 1 is a photograph from a preliminary drawing indicating the general lay-out of institutions of this kind. This cut, while not exactly true to detail, gives in a general way the outstanding features relative to the lay-out of general hospitals erected in Canada. The accommodation represented here makes provision for 900 cases distributed equally for convalescent and active treatment care. The long and comparatively narrow buildings, two storeys in height, represent the ward buildings, each ward consisting of about 35 beds, with complete toilet and ablution facilities in direct connection with each ward. The central building in the foreground of the group is the administrative unit controlling the whole institution. The administration building also contained all operating rooms, X-Ray departments, clinics, special treatment rooms, etc. To the rear, connected by a closed corridor to the main group, will be noted a T-shaped building which represents the kitchen and dining-room lay-out for the entire institution. The remainder of the group at this institution, not all shown in the picture, consist of nurses' home, doctors' residences, quarters for male and female help, recreation and vocational building, and power-house. Such units as were constructed of this nature, comprised a community in themselves, being self-contained in every sense of the word.

In choosing a location for general hospitals, the Department was governed by many contributing factors. In many instances, it was found desirable to utilize Government-owned property. In some cases, institutions used for various purposes in pre-war days were procured



NO. 14.—OLD GOVERNMENT HOUSE, CHARLOTTETOWN, P.E.I., ADOPTED FOR HOSPITAL PURPOSES—NOW KNOWN AS RENA MCLEAN MEMORIAL HOSPITAL.



NO. 15.—ONE OF THE STANDARD WARD UNITS ERECTED IN CONNECTION WITH RENA MCLEAN MEMORIAL HOSPITAL.



No. 16.—GOVERNMENT HOUSE, FREDERICTON, AT THE TIME OF ITS ALTERATION FOR HOSPITAL PURPOSES.



No. 17.—A RECREATION BUILDING NEARING COMPLETION.



NO. 18.—A WARD IN THE PRINCE OF WALES HOSPITAL, MONTREAL. THIS INSTITUTION WAS AT ONE TIME LOYOLA COLLEGE.



NO. 19.—LIBRARY AND READING ROOM, PRINCE OF WALES HOSPITAL, MONTREAL.

and altered to suit hospital requirements. To those institutions which were acquired, it was often found necessary to add ward units of the type here illustrated. An instance of this may be cited in reference to the large institution at Tuxedo Park, Winnipeg. At Tuxedo Park, the group of buildings constituting the old Agricultural College was obtained and properly altered and equipped to provide approximately 300 beds. The existing group of buildings did not, however, provide sufficient accommodation or dining-room and kitchen services, and two ward buildings, each accommodating 150 patients, together with dining-room and kitchen buildings, were added.

Illustration No. 2 shows the two ward buildings which were constructed at Tuxedo, and at the right-hand side of the picture will be noted the operating unit attached to the active treatment ward. In observing this picture, one will note the great attention that was paid to the provision of an abundance of light. Solariums providing sitting out space for all patients were provided for each ward.

Where possible, institutions were acquired which had already been built for hospital purposes. Two outstanding features of the policy in this regard are evidenced by the acquisition of the Ontario Hospital at Whitby, and the Provincial Institution at Guelph, the latter now known under the Departmental name of "Speedwell Hospital." At Whitby, besides occupying accommodation already provided in the Provincial buildings, two large buildings suitable for convalescents were erected. At Guelph, two wards connected to the main group of buildings were constructed in order to provide the necessary amount of active treatment accommodation at that institution. Illustration No. 4 shows the two ward buildings at Whitby just at the time construction work was being completed. Illustration No. 5 gives some idea of the general grouping of the Provincial Hospital at Whitby. The buildings erected by the Department are seen in the middle background of the picture. At Whitby, exceptionally good recreation facilities were afforded, the Province of Ontario joining the Federal Government in erecting a recreation hall adequate of

seating seventy-five per cent. of the population of the institution. This is illustrated in Figure 6.

Some mention has been made of the excellence of the food service lay-outs of some of the Department's institutions. These are illustrated in Figures 7 and 8, the last mentioned illustration showing a line of patients passing a cafeteria counter. Dining-room and recreational facilities enjoyed by the patients at Whitby are shown in Illustrations 9 and 10 respectively.

At Toronto, the Booth Memorial Building belonging to the Salvation Army was acquired, and 300 beds and dining-room and kitchen facilities were added. This accommodation, in the first instance, was largely used for the care of amputation cases. It now accommodates to its full capacity, 450 active treatment cases, and is considered one of the best units being operated by the Department. Mention has been made of the recreational facilities afforded, and in Illustration No. 11, a standard recreation building is seen in the mid-background. To the right in the picture is a building designed and equipped for the fitting of artificial limbs. On the left, a view of one of the solariums of the standard ward units is visible. Complete operating facilities were also installed at this institution, and a view of the main operating suite is given in Illustration No. 12. It was impossible to make this operating suite ideal in every regard, inasmuch as some features necessarily depended upon conditions of the existing building. In so far, however, as equipment and general appointments are concerned, everything installed was of the most up-to-date character possible. Figure 13 shows a battery of lavatories in one of the ablution rooms at this institution.

Another example of the Department's policy of acquiring existing buildings for hospital purposes is in the instance of Government House at Charlottetown, P.E.I. Illustration 14 shows the Government House, and Illustration 15 shows one of the standard ward units which were attached to this building to provide the necessary extra accommodation.

At Fredericton, N.B., the old Government House shown in Illustration 16 was renovated and equipped for hospital purposes, and two ward units, each of 150 beds, erected. Figure 17



NO. 20.—EUCLID HALL, TORONTO. THIS BUILDING WAS LOANED TO THE GOVERNMENT BY THE MASSEY ESTATE.



NO. 21.—CRAIGDARROCH HOSPITAL, VICTORIA, B.C. THIS BUILDING HAS GENERALLY BEEN KNOWN AS CRAIGDARROCH CASTLE.

illustrates a recreation and vocation building under erection at this institution.

At Montreal, the Department was able to obtain for its use Loyola College on Drummond Street. This building was renovated and equipped to accommodate about 200 active treatment cases, and Figure 18 illustrates one of the ward units in this building. Figure 19 is of a reading room and library also at this institution.

At Moose Jaw, Sask., a standard ward unit, together with dining-room and kitchen service, was erected in connection with the Ross School, which building was suitably altered.

It has not been found necessary to date to provide extensive accommodation for incurables. A centre at Toronto known as Euclid Hall, illustrated in Figure 20, has been in operation for some time—the building acquired being loaned to the Government by the Massey Estate. Another of the incurable centres operated by the Department is at Victoria, B.C. This institution consists of what was known as Craigdarroch Castle, and is illustrated in Figure 21.

In Vancouver and vicinity, no active construction programme was carried out, as the Department was able to obtain, on a rental basis, property belonging to the Western Residential Schools and altered and equipped these institutions, which are known as Shaughnessy and Fairmont. A fair idea of the attractiveness of Shaughnessy is illustrated in Figure 22.

Accommodation for those suffering from mental disabilities was provided by the alteration of Pickering College, at Newmarket. Illustration 22a gives a general view of the exterior of this institution. Accommodation for mental cases was also provided at Cobourg, where the Provincial Institution was acquired, and accommodation for 300 patients added. Illustration 22b shows the two standard ward units referred to. At Cobourg, there was also erected one of the Department's standard Recreation Halls, and from observing Illustration 22c, it will be noted that this building has been fully equipped with gymnasium apparatus, billiard tables, etc. An exterior

view of this building is given in Illustration 22d.

The institutions specifically referred to in the preceding paragraphs do not constitute all the general hospital centres which were provided by the Department, but illustrates, in a general way, the policy that was followed. At Halifax, a complete new institution for accommodating 600 patients was designed, and construction commenced during the latter part of 1917. This institution is known as Camp Hill Hospital. Two private residences on Cape Breton Island were acquired, namely, the Ross and Moxham Homes. These were altered and properly equipped for hospital purposes.

A large hospital at Ste. Anne de Bellevue was designed by the Department, with accommodation for 600 patients and was commenced in 1917.

Early in 1918, accommodation in Toronto for orthopaedic cases was urgently required. The Department succeeded in obtaining a building belonging to the National Cash Register Company. As soon as acquisition was made of these premises, plans were executed and extension work put in hand. Illustration 22e illustrates construction work in progress during March of 1918.

At Burlington, near Hamilton, the Brant House Hotel was acquired, and accommodation provided for upwards of 300 patients. Buildings of the hotel type do not generally lend themselves to use as a hospital, but this building proved rather the exception, and the facilities afforded after the reconstruction work had been completed, were exceptionally good. A view of this building is given in Illustration 22f.

The handling of hospital cases, immediately upon their arrival from overseas, was a matter which was taken care of by the establishment of two large Receiving Hospitals, the one located at Halifax, and the other at Quebec.

The reception depot at Halifax provided accommodation for 600 treatment cases, and a ward giving accommodation for 40 was set aside for those suffering from tuberculosis.

In order that the cases arriving at Halifax and Quebec might be conveniently placed in proper hospital accommodation immediately



No. 22.—A VIEW OF ONE OF THE BUILDINGS AT SHAUGHNESSY HOSPITAL, VANCOUVER.



No. 22a.—NEWMARKET HOSPITAL FOR INSANE. THIS WAS ORIGINALLY PICKERING COLLEGE AND WAS ADOPTED FOR HOSPITAL PURPOSES BY THE DEPARTMENT.



No. 22b.—TWO OF THE STANDARD UNITS ADDED TO THE DEPARTMENT'S INSTITUTION AT COBOURG, ONTARIO.



No. 22c.—INTERIOR OF RECREATION BUILDING AT COBOURG HOSPITAL. THIS SPACE, BESIDES BEING USED FOR MOVING PICTURES AND THEATRICALS, WAS OFTEN USED FOR INDOOR BASEBALL, CONSEQUENTLY WIRE GUARDS ON ELECTRIC FIXTURES AND WINDOWS HAVE BEEN INSTALLED.



No. 22d.—EXTERIOR VIEW OF RECREATION BUILDING AT COBOURG HOSPITAL. IN THE EXTENSION TO THE RIGHT AT THE REAR, IS INSTALLED UP-TO-DATE BOWLING ALLEYS.



No. 22e.—DOMINION ORTHOPÆDIC HOSPITAL, TORONTO, CONSTRUCTION WORK IN PROGRESS, ADDING EXTRA STOREYS TO PROVIDE ACCOMMODATION FOR 900 PATIENTS. THIS BUILDING WAS ORIGINALLY OWNED BY THE NATIONAL CASH REGISTER COMPANY.

upon their arrival, the two receiving depots referred to, were located at the dockage piers. The unit at Halifax constituted the entire top floor of Pier No. 2. The unit at Quebec comprised the second floor of the Immigration Pier, and provided accommodation for about 2,000 men.

By having these Receiving Depots at the Pier where hospital ships arrived, it was possible to place the man immediately upon arrival in proper accommodation. Cases were kept at these points until such time as they had properly recovered from the sea voyage, and were then distributed in hospital trains to the various institutions throughout the country.

It may be observed at this point, that hospital trains, complete in every detail, were provided. The accommodation consisted of hospital coaches, cars providing dining-room and kitchen accommodation and sleeping quarters for the staff on duty. The exterior and interior of one of the hospital cars is shown in Illustrations 22g and 22h.

The policy adopted by the Department in providing sanatorium accommodation for those suffering from tuberculosis, will prove of lasting benefit to the Dominion. Canada had, in pre-war days, a string of sanatoria from coast to coast which were variously operated by Provincial Governments or independent associations.

With the arrival of patients from overseas, it was very apparent that Canada's hospital programme with reference to accommodation for those suffering from tuberculosis, would have to be a very extensive and complete one, if the cases were to be properly cared for. Civilian sanatoria accommodation was full to overflowing, and it was impossible, therefore, to obtain admittance for the Department's patients to these institutions. At the same time, it seemed to be ill-advised for the Department to launch into a programme of erecting sanatoria throughout the length and breadth of the country, without looking toward the final use to which these institutions might be put.

The Department finally succeeded in obtaining the co-operation of those in charge of various sanatoria already established, in making

extensions to existing facilities. The co-operation thus afforded was usually in the manner of a substantial contribution toward the cost of such extensions, the buildings so erected to finally revert to the control of the civilian institution. By this procedure, great economy in the provision of tuberculosis accommodation throughout Canada was possible. In many cases, it was found possible to add considerable bed accommodation to institutions without materially increasing the general services. Such opportunities meant that the Department had the advantage of a large investment without the attendant first costs.

Always having in mind the more or less permanent nature of the sanatoria accommodation to be provided, it is possible that even more research work was done in the matter of planning these institutions than that followed in the general hospital work.

The design of accommodation for infirmary and incipient cases as finally followed by the Department, has practically revolutionized sanatoria lay-outs in Canada. From a comparison of the Canadian plans with those of other countries, it is doubtful if any of these later institutions show the same thought and care as evidenced in the designs of those prepared by the Department. Sanatoria superintendents and professional men expert in the treatment of tuberculosis, were constantly in consultation, and an endeavor was made to arrive at and incorporate the best ideas available. Some of the prominent institutions in the Country to the South were visited with a view to ascertaining the best practices followed in that Country.

A technical discussion as to the various considerations leading to the different designs adopted would be rather out of place in this chapter, but mention of some of the works carried out will be in order.

One of the first works of any extent, in reference to the provision of tuberculosis accommodation that was carried out, was at Mowat Sanatorium, Kingston. This institution when acquired consisted merely of a main building, as per Illustration 23. Need for more accommodation was quickly felt at this institution,



No. 22f.—A VIEW OF BRANT HOSPITAL, BURLINGTON, ONTARIO, JUST AFTER ALTERATIONS HAD BEEN COMPLETED.



No. 22g.—AN INTERIOR VIEW OF ONE OF THE DEPARTMENT'S HOSPITAL CARS.

and pavilions of the 32-bed type were erected. These pavilions were designed early in 1917, and while their interior planning is not considered the best example of the Department's work, extremely good curative work has been done in them. One of the pavilions is illustrated in Figure 24. An interior view of one of the wards is given in Illustration 25, immediately after construction had been completed.

A corner of the kitchen in the main building at Mowat, as reconstructed according to the designs of the Department, is shown in Illustration 26. It will be noted from this illustration, the excellent type of equipment installed, and the sanitary finish to the floors. It was impossible to properly remodel all portions of this lay-out without going to undue expenditure.

Practically concurrent with the extensions being designed for Mowat Sanatorium, came the designing of two 32-bed pavilions at Mountain Sanatorium, Hamilton. Certain considerations made it desirable that these buildings be of a slightly different type to those erected at Mowat, and their design may be considered, architecturally at least, more attractive. One of these pavilions is shown in Illustration 27. Illustration 28 shows one of the wards in these pavilions.

With accommodation established at Mowat Sanatorium, Kingston, and Mountain Sanatorium, Hamilton, the need for similar space in practically all other parts of the country became apparent. The Department entered into co-operation with the London Health Association toward the establishing of necessary accommodation at Byron Sanatorium. Perhaps one of the best examples of the original design as followed by the Department in its tuberculosis work, is illustrated in the pavilion recently erected at this institution. The amount of accommodation afforded in this building for incipient cases, consists of 48 beds, comprising four wards, of 12 beds each. This number of beds to the ward, is a departure from the standard, but so far has proven to be very efficient. Illustration 29 gives the exterior view of one of the pavilions erected, just after construction work had been completed. Illustration 30 gives the interior of one of the wards. Each ward of 12 beds in pavilions of this nature is

provided with complete toilet and ablution facilities consisting of one shower bath, one stationary bath, two lavatories, two toilets, and one dental basin. Each patient is provided with a private, heated dressing room immediately to the rear of the ward in which he is located. At Byron Sanatorium, excellent recreational facilities have been afforded by the erection of a larger auditorium. The institution includes a most modern Infirmary, which is shown in Illustration 31.

The Nova Scotia Sanatorium at Kentville, originally an 80-bed institution, now accommodates upwards of 400 patients. Extensions to this Sanatorium were made at various times,—the earliest being in the summer of 1917, when two 32-bed pavilions were erected somewhat after the style of those at Mowat Sanatorium. It soon became apparent, however, that infirmary accommodation would have to be provided, and a 70-bed Infirmary was completed early in 1918. This building was designed with considerable forethought, and embodies many new features in its interior lay-out. An exterior view of this building is shown in Illustration 32. Soon after the completion of the Infirmary, there was a sudden influx of patients from overseas, and accommodation had to be provided quickly to meet the emergency. Canvas hutments specially designed for the treatment of tuberculosis were constructed to accommodate 160 patients in less than ten days. A partial view of this unit is shown in Illustration 33. Each tent accommodated eight patients, and special provision was made for free ventilation. This tent unit had in connection with it complete toilet and ablution facilities, and during the summer that it was in use gave excellent results. It is apparent, however, that tented colonies for winter use are impracticable, and the design of pavilions to provide the necessary accommodation was immediately proceeded with. One of these pavilions of the 48-bed type is shown in Illustration 34.

Concurrent with the extension of bed accommodation at the Nova Scotia Sanatorium, general services such as dining-room and kitchen, power plant, laundry, and so forth, had to be



No. 22h.—AN EXTERIOR VIEW OF ONE OF THE DEPARTMENT'S HOSPITAL CARS.



No. 23.—MAIN BUILDING, MOWAT SANATORIUM, KINGSTON.



NO. 24.—A 32-BED PAVILION, MOWAT SANATORIUM, KINGSTON.



NO. 25.—INTERIOR VIEW OF ONE OF THE 32-BED PAVILIONS, MOWAT SANATORIUM, KINGSTON.



No. 26.—A CORNER OF THE SERVICE ROOM IN THE KITCHEN AT MOWAT SANATORIUM, KINGSTON.



No. 27.—AN EXTERIOR VIEW OF ONE OF THE PAVILIONS ERECTED AT MOUNTAIN SANATORIUM, HAMILTON.

extended. Illustration 35 shows one of the work rooms in the complete laundry unit which was erected. Illustrations 36, 37, 38 and 39, give some idea of the general lay-out and equipment in the new Power House. The new kitchen and dining-room, necessitated by the large increase in accommodation at Nova Scotia Sanatorium, represents possibly one of the best examples of the Department's typical design in connection with work of this nature. All patients at this institution, with the exception of those who are confined to their beds, follow the cafeteria style of service.

Extensions to existing institutions at River Glade, N.B., and at St. John County Hospital, St. John, N.B., were also carried out, and sufficient accommodation provided to meet the requirements of the Department. Advantage was also taken of the sanatorium facilities existing in Lake Edward, Que., and an Infirmary providing the required number of beds was added to that institution.

Early in 1918, it became apparent that extra accommodation would be required in the Province of British Columbia, although the Department had acquired as many beds as it was possible from the civilian institutions. The British Columbia Anti-Tuberculosis Society, in co operation with the Department, commenced the erection in the Fall of 1918 of a hundred-bed Infirmary. The design of this building is entirely the product of the experience of the Department. The building was opened during the Summer of 1919, and its general appearance is illustrated in Figure 40, which shows the building just at the time of its completion. Figure 41 shows a series of sleeping porches opening immediately off the Infirmary bedrooms. Figure 42 shows one of the complete dispensaries that are installed in the building. Figure 43 shows one of the numerous recreation rooms for patients, where reading or quiet games may be enjoyed when the patient is well enough to take advantage of such facilities. Figure 44 shows the cafeteria corridor leading to the dining-room. In this picture, the steam table and battery of urns have not as yet been installed. Figure 45 is a corner of the general kitchen stores department, and shows a battery

of refrigerators which are operated by a mechanical refrigerating plant. Figure 46 is a view of the dining-room, just after its completion. The abundance of light and ventilation can be easily noted from the photograph.

In the Province of Alberta, the Department acquired institutions at Frank and Balfour, and designed temporary accommodation to take care of extra patients. Sufficient accommodation was not, however, obtainable at these two institutions, and due to certain considerations, it was found inadvisable to erect extensions to take care of the requirements. An agreement was reached during 1918 with the Provincial Government of Alberta by which the Provincial Government would erect a new institution near Calgary, the majority of the accommodation to be put at the disposal of the Department for such length of time as it might be required. The design of this institution, now known as Central Alberta Sanatorium, embodies some of the latest features of the Department's work.

A new type of pavilion peculiarly adapted to the rigorous climate of Western Canada has been adopted, and specialists claim that it is one of the best that has yet been attempted. Provision of adequate Infirmary accommodation has also been made, and this building incorporates the newest features considered desirable for the furtherance of the treatment of cases in the advanced stages of tuberculosis.

The general services of the institution were so designed that the institution could finally take care of 500 patients. Having in view the ultimate use to which this institution would be put, namely, the care of the general public of the Province of Alberta, the lay-out of the institution was arranged to properly provide male and female accommodation. Illustration 47 is a general block-plan of the lay-out—the buildings shown in black being those on which construction is now nearing a finality. From observing this illustration, it will be noted that the buildings are divided into two groups—each group consisting of a number of pavilions for incipient cases, and an Infirmary building providing the proper proportion of beds to take care of the advanced cases in each centre. Both groups are under the direct control of one



No. 28.—INTERIOR VIEW OF ONE OF THE PAVILIONS AT MOUNTAIN SANATORIUM, HAMILTON.



No. 29.—NEW TYPE OF 48-BED PAVILION ERECTED AT BYRON SANATORIUM, LONDON.



NO. 30.—INTERIOR VIEW OF ONE OF THE WARDS IN 48-BED PAVILION AT BYRON SANATORIUM, LONDON.



NO. 31.—INFIRMARY BUILDING, BYRON SANATORIUM, LONDON.
ARCHITECTS, WATT AND BLACKWELL, LONDON, ONT.



NO. 32.—ENTRANCE TO 70-BED INFIRMARY, NOVA SCOTIA SANATORIUM, KENTVILLE, N.S.



NO. 33.—VIEW OF EMERGENCY TENT COLONY WHICH WAS ERECTED COMPLETE IN LESS THAN TWO WEEKS AND TOOK CARE OF 160 PATIENTS FOR SEVERAL MONTHS.

administration building which, in turn, is in direct communication by underground tunnels with the service buildings, the Infirmaries, and the power-house.

The administration building lay-out embodies all features necessary in the business management and control of a centre of this kind, and in it are installed complete operating suites, clinics, treatment rooms, X-Ray departments, and so forth, for the whole institution. This method of centralization is somewhat of a departure from the usual custom which has generally been followed in civilian institutions, it being usual to place such facilities in the Infirmary. This, however, in a lay-out such as that planned for Central Alberta Sanatorium, would prove uneconomical, inasmuch as the existence of two infirmaries would necessitate the duplication of equipment and general control. The service building, which will ultimately contain two large dining-rooms, is designed to give to those patients who are well enough to walk to their meals, food by the cafeteria system. The central kitchen in this building will prepare all food for the entire institution, and food will be delivered to the Infirmaries in heated food wagons through underground tunnels. The power house to the rear is also connected with the main group of service buildings by a tunnel, and embodies all those features necessary in a complete power house unit. Arrangements are pending with the Canadian Pacific Railway, whose main line is in the vicinity of the Institution, to run a spur to the power house, so that coal may be delivered with the least handling possible.

Illustration 48 is a view of one of the pavilions when construction work was fairly well advanced. The lay-out of this building embodies many new features as is illustrated in Figure 49, which is a photograph of the actual plan. In observing this plan, it will be noted that each ward consists of 8 beds. A living-room of generous dimensions is in direct connection with the ward, and opening off ward and living-room is an open-air cure veranda. The screen shown on plan, between the ward and cure veranda, is composed of disappearing sash, and when the inclemencies of the weather are so extreme that the patients

would be distressed, these sash are raised to guard against the inclemencies. It will be noted that each patient is provided with a dressing-room in the heated portion of the building, in direct connection with ample toilet and ablution facilities. To the rear of the central portion of the building, some new features in pavilions of this nature have been incorporated. A nurses' room has been added for the convenience of the staff on duty. In the event of a patient becoming distressed by hemorrhage or through any other cause, he may be removed from the general ward to the emergency ward, and the proper attention administered without causing disturbance to the rest of the patients. Ample space for storage of linens and cleaners' closet has also been provided.

Figure 50 gives a view of the dining-room while still under construction. The presence of large windows provides an abundance of sunlight and ventilation. Illustration 51 shows a view of the administration building—the business administration offices and treatment rooms being located on the first floor, the top floor being properly laid out to accommodate nurses and doctors. When the institution is increased to its final capacity, the top floor of this building is so designed that it can be readily changed to suit administrative and treatment purposes, and the nurses and doctors will then be housed in specially designed buildings.

Accommodation for patients suffering from tuberculosis in the Province of Quebec was, until the latter part of 1918, obtainable in the Laurentian Sanatorium at Ste. Agathe des Monts, and at Lake Edward Sanatorium, Lake Edward, P.Q. The latter institution was acquired by the Department in the early days of the work, and is still in successful operation.

With respect to Laurentian Sanatorium, this institution was operated by a Society, and the Department rented bed accommodation at so much per patient. It ultimately developed, however, that a great deal of extra accommodation was required, and the Province of Quebec, in co-operation with the Department, purchased the premises, and are now erecting in connection with the main building, accommodation for 200 extra beds. The provision of extra accommo-



No. 34.—ONE OF THE DEPARTMENT'S STANDARD 48-BED PAVILIONS ERECTED AT NOVA SCOTIA SANATORIUM, KENTVILLE, N.S.



No. 35.—INTERIOR VIEW OF LAUNDRY, NOVA SCOTIA SANATORIUM, KENTVILLE, N.S.

dation at this institution necessitated the erection of a new Power House and a new kitchen and dining-room building to serve the whole institution. Both of these structures are of the most advanced type that have yet been attempted by the Department, and the up-to-date facilities afforded have received most favorable comment. The extra accommodation for patients is provided in five pavilions, which are of the same type as those used in the Central Alberta Sanatorium. Illustration 52 shows one of these pavilions, the construction of which is rapidly nearing completion. A view of the service building is shown in Illustration 53.

A great degree of co-operation was also obtained from the authorities operating the Manitoba Sanatorium for Consumptives, at Ninette, Man., and an extensive constructional programme was put in hand,—the design of the buildings being to some extent superintended by the Department. The extension provided gave excellent accommodation for both the infirmary and pavilion type of patient. A view of the Ninette Sanatorium is given in Illustration 53a.

The Province of Saskatchewan also lent itself in hearty co-operation toward the provision of sufficient accommodation for the Department's requirements, and the Department co-operated with the Saskatchewan Society in extending the accommodation at Fort Qu'Appelle Sanatorium. The planning of the extra buildings was carried out by a private architect in the employment of the Saskatchewan Society, and all plans were submitted to the Department for approval before the work was proceeded with. A general view of the Qu'Appelle Sanatorium is shown in Illustration 53b, while construction work was still under way. From observing this photograph, one will note the ideal location of the institution. It is in a location surrounded by hills which give ample protection from the prevailing winds of the Western Provinces.

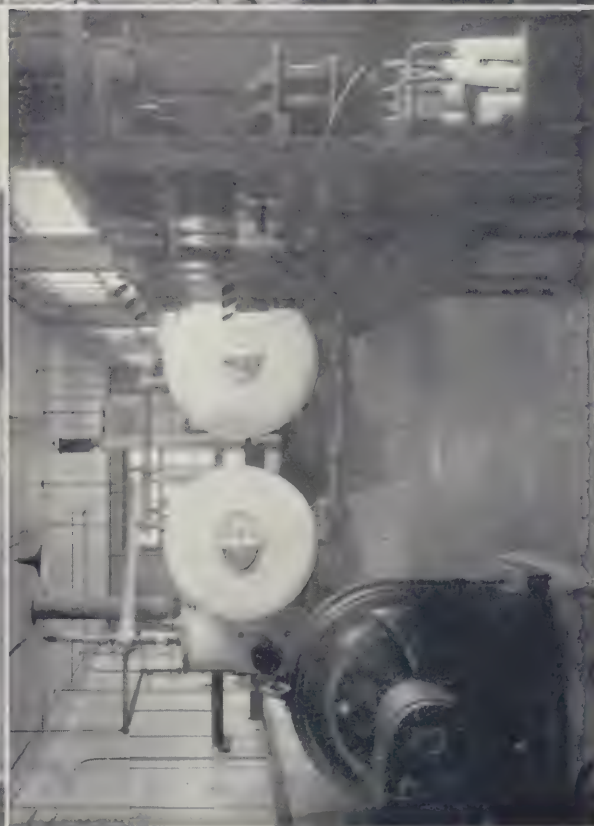
It will be readily understood that in maintaining and operating so many institutions throughout the country, a great deal of supplies and equipment had to be purchased. The policy followed by the Department in reference to stores, was the establishment of three Central

Stores throughout the Country. One of these was located at Regina, to serve the Western Provinces, one at Guelph in connection with Speedwell Hospital, and one in Montreal to serve Quebec and the Maritime Provinces.

The store-house at Guelph, depicted in Illustration 54, was carefully designed with a view to efficient handling of supplies and equipment. As will be noted from the photograph, this building is four storeys high. Entrance doors exist at each end of the building, and a concrete roadway runs through the entire length of the ground floor. The arrangement of floor levels will be seen from Illustration 55, and it will be noted that loaded wagons and motor lorries drive in on the ground floor and are unloaded by means of the electric travelling train shown in the picture. This arrangement aids materially in the rapid and efficient loading and unloading of supplies, and at the same time permits of a convenient arrangement for the classification of stores.

From Illustration 56, a very good idea will be formed of the variety of equipment, furnishings and supplies that had to be carried. In this picture may be observed hospital mattresses, ward furniture, metal reclining chairs, baled goods, etc., all of these things were constantly in demand.

The carrying out of the Department's policy in reference to hospital accommodation, is perhaps one of the most extensive schemes of its kind that has ever been carried to a successful conclusion under one central organization in Canada. Its success was largely due to the farsightedness and capabilities of the late Deputy Minister of the Department, Mr. Samuel A. Armstrong. Mr. Armstrong, previous to his connection with war work for the Federal Government, was Assistant Provincial Secretary of the Provincial Government of Ontario, and during his period of office with the Province, promoted many large schemes for the hospitalization of the populace of Ontario. The Chief Architect of the Provincial Secretary's Department of Ontario, Mr. Jas. Govan, was also



Nos. 36, 37, 38, 39.—INTERIOR VIEW POWER HOUSE, NOVA SCOTIA SANATORIUM, KENTVILLE.



NO. 40.—VIEW OF 100-BED INFIRMARY, ERECTED IN CONNECTION WITH TRANQUILLE SANATORIUM, TRANQUILLE, B.C.



NO. 41.—SHOWS SERIES OF SLEEPING PORCHES IN CONNECTION WITH INFIRMARY ACCOMMODATION, TRANQUILLE SANATORIUM.



NO. 42.—A DISPENSARY IN TRANQUILLE SANATORIUM.



NO. 43.—RECREATION AND SITTING-ROOM FOR USE OF PATIENTS, TRANQUILLE SANATORIUM.

largely instrumental in a consulting capacity, in reference to the formulating of original schemes for Canada's war hospitals. While Mr. Govan was never actively engaged by the Department, his advice was often sought. The general merits of the work can be generally attributed to the faithful and untiring efforts of those men who were actively engaged in the work. Special mention may here be made of the untiring attention and close application paid by Mr. W. L. Symons to the work during the period that he was on the staff of the Department.

Canada's type of war hospital, as already stated herein, was evolved after most careful consideration had been given to the problem. The scheme adopted was largely on account of the necessity of keeping constructional expenditures to the absolute minimum. During the operation of the institutions, other facts have become apparent, and it has been found that their operation and general upkeep has been maintained with just as much ease, and possibly with more economy than hospitals erected for civilian purposes during pre-war days.

When it is considered that the patient day costs in Canada's war hospitals does not surpass, and is probably less than similar costs in other institutions, and when this consideration is coupled with the fact that the capital expenditure involved approximates less than 50% of what ordinary institutions cost in pre-war days, one immediately realizes that here is an object lesson, a careful study of which may lead to solving the difficult problem of providing Canada with sufficient institutions to properly meet the needs of its population.

There is a great lack of civilian hospital accommodation in Canada at the present time, and if proper and adequate facilities are to be provided, some very progressive programme will have to be instituted.

Those who are responsible for the public welfare, while realizing the necessity of accommodation, are loath to promote constructional projects that would properly meet the situation, on account of the enormous increase in construction and material costs. Even before the war, the erection of hospitals and institutions involved

expenditures that invariably raised the tax rate apparently out of all proportion to the facilities afforded. Only our larger cities seem to have been able to finance the erection of institutions that would afford the most up-to-date facilities.

One step toward solving the cost of institutional work is seen in the Community Hospital Movement. This proposal puts forth the idea of establishing central institutions which will serve a number of neighboring municipalities. It is believed that this step is one in the right direction, and if the proper degree of inter-municipal co-operation is maintained, there is no reason why such projects cannot be carried to a successful finality. To-day, with our advanced facilities for transportation, the good road movement, and the almost universal use of motor transport, the community hospital, serving a number of municipalities, is an idea which, if carefully worked out, should give the desired results.

There is another phase of institutional work which, in these days of "monolithic" structures, seems to have been passed unnoticed by those who are most affected. Civilian hospitals erected in pre-war days have generally been of the "monolithic" or multiple storey type. Canada's war hospitals which represent an accommodation for nearly 20,000 men, have been commented upon most favorably by those in a position to criticize, as obtaining all those features of utility that go to make up an efficient working hospital. Due to the rapid advance that is continually being made in the science of medicine and surgery, the useful life of an institution is a comparatively short one. We have evidence of this at every hand, inasmuch as hospitals constructed comparatively a few years ago are now out of date, and professional men are urging the provision of more up-to-date facilities. The unit type of hospital, as followed by Canada for war purposes, would appear to more nearly meet the situation than any other possible scheme. The buildings are of cheap construction, but at the same time their interior arrangement and finish provides every facility required. Extensive constructional methods and elaborate use of bricks and mortar do not aid in the



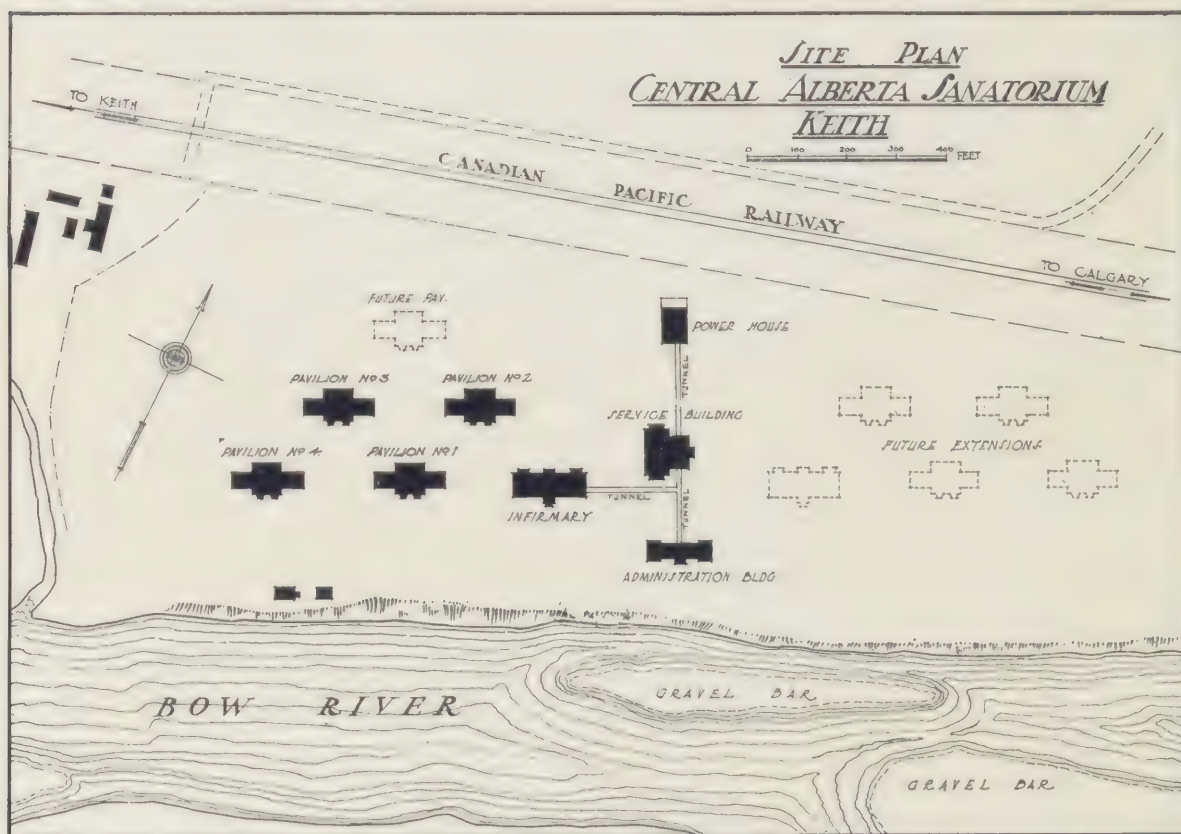
No. 44.—CAFETERIA CORRIDOR IN SERVICE BUILDING AT TRANQUILLE SANATORIUM.



No. 45.—A BATTERY OF REFRIGERATORS IN CENTRAL STORES, TRANQUILLE SANATORIUM.



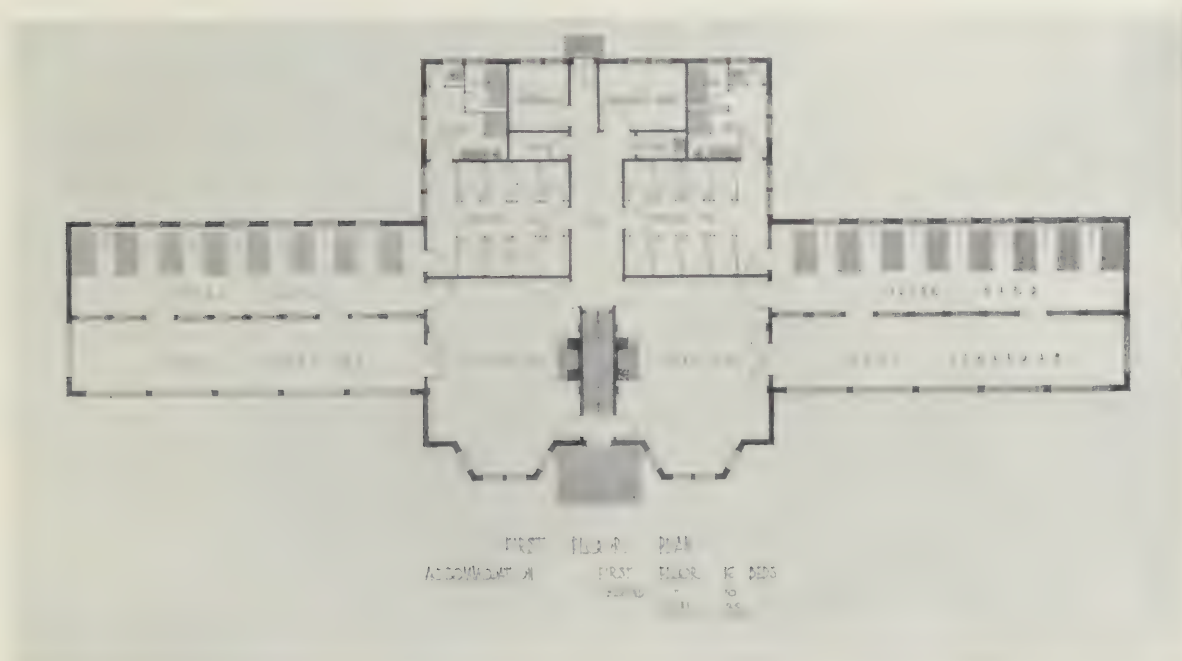
No. 46.—NEW DINING-ROOM IN SERVICE BUILDING AT TRANQUILLE SANATORIUM, JUST AT TIME OF COMPLETION.



No. 47.—BLOCK PLAN OF CENTRAL ALBERTA SANATORIUM, DESIGNED BY THE DEPARTMENT AND ERECTED JOINTLY BY THE PROVINCIAL AND FEDERAL GOVERNMENTS.



No. 48.—ONE OF THE DEPARTMENT'S NEW TYPE OF PAVILIONS DESIGNED TO MEET EXTREME CONDITIONS IN WESTERN CANADA.



No. 49.—FLOOR PLAN LAY-OUT OF SPECIAL PAVILION.

recovery of the patient. It would seem, therefore, that the logical conclusion arrived at in the solving of Canada's future hospital policy, is that designers should confine themselves to the least possible capital expenditure, so as to permit of procurable funds being readily available for the proper maintenance and professional care of the patient. Reduction in capital expenditure means reduction in hospital rates. Reduction of capital expenditure will make funds available for improved services. It will surely be conceded that money expended in providing increased numbers of medical staff and nurses, accrues directly to the benefit of the patient, whereas such money sunk into elaborate building methods, is lost entirely, in so far as the well-being of the patient is concerned.

It is not to be concluded from these remarks that the erection of inflammable structures is recommended. Institutions composed of unit buildings of one storey height, or at the most two, will permit of the lightest possible type of fireproof construction. The exact type of construction to be used is a matter dependent upon too many considerations for full analysis here. Economy lies in the policy of using Unit buildings to obtain the required accommodation instead of Multiple storey construction.

Who can foretell what the ideal type of hospital will be in the course of the next few years. Conditions that were considered ideal a comparatively short time ago, have now been discarded. It seems probable that a similar advance will be made in the future years. To keep pace with this advance, if hospitals constructed to-day are designed and erected with proper forethought, regard to capital expenditure, and the probable length of their useful life, they may, when ideas have changed, be altered, extended, or even demolished, in order to meet the ever-changing requirements. Such facility of alteration, change or renewal could not possibly occur in a monolithic structure of reinforced concrete of the multiple storey type. Such a building, after its usefulness has come to an end, must be thrown into the discard, in so far as its use for a hospital goes.

The possibilities discussed in the preceding paragraphs are being entertained by experts, both on this Continent and in Europe. The tendency of thought of many is toward the semi-permanent type of construction for future institutional requirements. It would appear that Canada's experience gained in its hospitalization programme confirms, to a large extent, the soundness of these views.



No. 50.—A VIEW OF SERVICE BUILDING UNDER CONSTRUCTION AT CENTRAL ALBERTA SANATORIUM.



No. 51.—REAR VIEW OF ADMINISTRATION BUILDING, CENTRAL ALBERTA SANATORIUM.



No. 52.—VIEW OF SPECIAL PAVILION ADAPTED BY THE DEPARTMENT IN EXTENSIONS MADE TO LAURENTIAN SANATORIUM.



No. 53.—DINING-ROOM AND KITCHEN BUILDING WITH SEATING ACCOMMODATION FOR 200 PEOPLE AT LAURENTIAN SANATORIUM. VIEW TAKEN JUST AS CONSTRUCTION WAS BEING COMPLETED.



No. 53a.—VIEW OF MANITOBA SANATORIUM, NINETTE, MAN. VIEW HAS BEEN TAKEN FROM THE RISING GROUND TO THE REAR OF THE INSTITUTION.



No. 53b.—GENERAL VIEW OF SASKATCHEWAN'S SANATORIUM NEAR FORT QU'APPELLE.



No. 54.—CENTRAL STORES BUILDING LOCATED AT SPEEDWELL HOSPITAL, GUELPH. STOCKS OF ALL HOSPITAL EQUIPMENT AND SUPPLIES ARE CARRIED IN THIS BUILDING FOR USE IN ALL OF THE DEPARTMENT'S INSTITUTIONS.



No. 55.—INTERIOR VIEW OF CENTRAL STORES BUILDING AT GUELPH, SHOWING THE TIER ARRANGEMENT OF FLOORS, ADOPTED TO FACILITATE EFFICIENT HANDLING OF STOCK.



No. 56.—ANOTHER VIEW OF INTERIOR OF STORES BUILDING, GUELPH, GIVING A GENERAL IDEA OF THE ARTICLES CARRIED IN STOCK.



DEPARTMENT OF SOLDIERS' CIVIL RE-ESTABLISHMENT BUILDING, SPADINA AVENUE, TORONTO. IN ADDITION TO THE GENERAL ADMINISTRATIVE OFFICES FOR THE PROVINCE OF ONTARIO, THE MANUFACTURING PLANT OF THE ORTHOPAEDIC AND SURGICAL APPLIANCES BRANCH IS SITUATED IN THIS BUILDING

Supplies and Equipment Branch

This Branch is charged with the provision of and the proper keeping of the records pertaining to all furnishings and equipment of the various institutions and offices of the Department throughout the Dominion, with the exception of the technical equipment provided for Vocational training, which is under the charge of the Vocational Branch.

(1) *Equipment for new hospitals and sanatoria.*—When the Department is opening a new institution, blueprints of the premises are furnished by the Engineering Branch, which plans show the buildings room by room and also the purpose for which each room will be used. From these blueprints lists are prepared giving the furniture and equipment allotted to each room, as laid down in the "Standard Table of Equipment" adopted by the Department. A summary of these lists is then compiled, and requisitions for the purchase of the equipment passed to the Chief Purchasing Agent. Orders for the equipment are placed sufficiently long ahead to allow for the delivery of the goods and their being placed in the buildings in time for the opening of the institution on the date specified.

(2) *Equipment for institutions already in operation.*—Stores are maintained in all institutions. When replenishment or new equipment is required for an institution already in operation, the storekeeper prepares a requisition for the articles required, and submits it to the Medical Superintendent in charge, or his representative, who, if he approves, affixes his signature and passes the requisition to the Assistant Director of the Unit for his approval. If the requisition is approved by the Assistant Director, he forwards it to the Head Office, Ottawa, for the necessary action in accordance with the requirements of the War Purchasing Commission, unless the goods are emergently needed. Provision is made for emergency purchases by Assistant Directors without first referring requisitions to Head Office. Such emergency

transactions are, however, checked later at Head Office.

When the requisition is received at the Head Office, it is immediately entered in the requisition register for future reference. Before taking any action, the quantities of the articles requisitioned for are checked against the quantities shown as on hand on the equipment ledger of the institution. If it is considered that the goods are actually required, a covering requisition is made out and passed to the Chief Purchasing Agent, together with a copy of the original requisition for purchase.

When the order for the goods has been placed by the Purchasing Branch, a copy of the requisition is returned to the Supplies and Equipment Branch, giving purchase order number as well as the name of the firm with whom the order has been placed. This copy of the requisition is then returned to the Assistant Director of the Unit for his information in order to enable him to communicate direct with the Contractor if the goods are not delivered within a reasonable time. If, however, the quantities of the articles requisitioned for are considered excessive, or if the goods specified are not allowed on the Standard Table of Equipment, the requisition is returned to the Assistant Director with a covering letter.

(3) *Receiving of equipment at institutions.*—On receipt of goods at an institution, they are carefully checked by the storekeeper as to quantities, and receiving slips made out covering each order. (It may be stated in this connection that the copies of the orders sent to the storekeeper do not show the quantities of the various articles ordered, thus necessitating an actual count of the goods.) These receiving slips are then checked with the purchase orders and invoices by the Accounting Branch of the Unit in which the institution is located, before the invoices are certified for payment.

(4) *Equipment Ledgers.*—In order to maintain a correct record of all equipment, whether

the property of or on loan to the Department, equipment ledgers are kept for all institutions and offices under the Department. In the case of goods purchased, the entries show the dates of purchase, names of contractors, invoice numbers and prices of articles, which information is taken from the respective invoices. When articles are "on loan," they are entered on the ledgers with a notation to that effect. If articles of equipment have been donated, they are shown on the ledgers as "Donations." Equipment ledgers for the institutions and offices in each Unit are also kept at the Unit Head Offices for the purpose of verifying the accuracy; of the ledgers physical inventories are taken quarterly and checked with the records.

(5) *Condemnation Boards*.—When articles of equipment have been broken or become of no further use through fair wear and tear, they are taken back into stores and held for inspection by the Condemnation Board. This Board, consisting of the Assistant Director of the Unit, his representative at the institution, and the Medical Superintendent of the sanatorium or hospital, meets at each institution quarterly, or more often, if required, for the purpose of examining such articles as may be brought before them owing to their being of no further use, as well as to investigate losses. The findings of the Board are forwarded to Head Office for the approval of the Deputy Minister, and, if approved by him, are the authority for having such articles written off charge on the equipment ledgers.

(6) *Central Stores*.—In order to facilitate the purchase of equipment to the best advantage, orders are placed for large quantities, and such equipment and supplies are stored in the three Central Stores operated by the Department in Montreal, Guelph, and Regina. This enables

the Department to supply urgent needs with the least possible delay.

(7) *Technical Equipment, Vocational Branch*.—Complete ledgers are kept by the Vocational Branch of the equipment in each institution and the supplies sent to it, as well as of the disposition of these supplies. From these statistics is obtained the distribution of costs.

These Equipment Ledgers are accessible at any time, and show the amount of equipment in any class-room in any school which is directly under the Department. The vocational equipment is purchased through the general purchasing system on requisitions approved by District Vocational Officers.

When course outlines are submitted to Ottawa, the Equipment Ledgers are scanned very closely in order to ascertain whether or not the school possesses the equipment for satisfactorily giving the course suggested. If the equipment is found to be inadequate, a suggestion is made that it be brought up to date by the purchase of second-hand or new machinery, so that every moment of the ex-soldier's time during his re-training course will be profitably spent. That is, the greater stress is placed on practical demonstration and operation.

The Equipment Ledgers also give a definite, reliable record of all tools and machinery loaned by the various manufacturers of machinery for certain purposes, such as demonstration of tractors, sulky plows, disc harrows, gas engines, magnetos, carburetors, delco lighting systems, battery sections, demonstration boards of various kinds; in fact, a great variety of machinery which is of extreme importance to a school, but need not be purchased, since manufacturers make it a point of their advertising to supply schools with demonstration material, providing it is returned, after a certain definite period, in good condition.

Purchasing Branch

The Purchasing Branch of the Department at Ottawa and the sub-branches in each Unit are under the control of the Chief Purchasing Agent, whose duty it is to purchase, for all branches of the Department, all supplies and equipment required, to secure invoices covering such purchases and pass them to the Accountant for payment.

Purchases are made only on requisitions, which must be properly approved by either the Head of the Department for which the goods are required or by the Assistant Directors of the Units.

Tenders are called for from manufacturers and wholesalers and are submitted by them in sealed envelopes, showing only on the outside the number of quotation request and the date it is due to be opened. Such envelopes remain sealed until noon of the day shown thereon, when they are opened, tenders stamped and initialled, and prices scheduled in the office of the Purchasing Agent, in the presence of a Representative of the War Purchasing Commission.

The methods and routine followed are those approved by the War Purchasing Commission, with whom the Chief Purchasing Agent is continually in close touch.

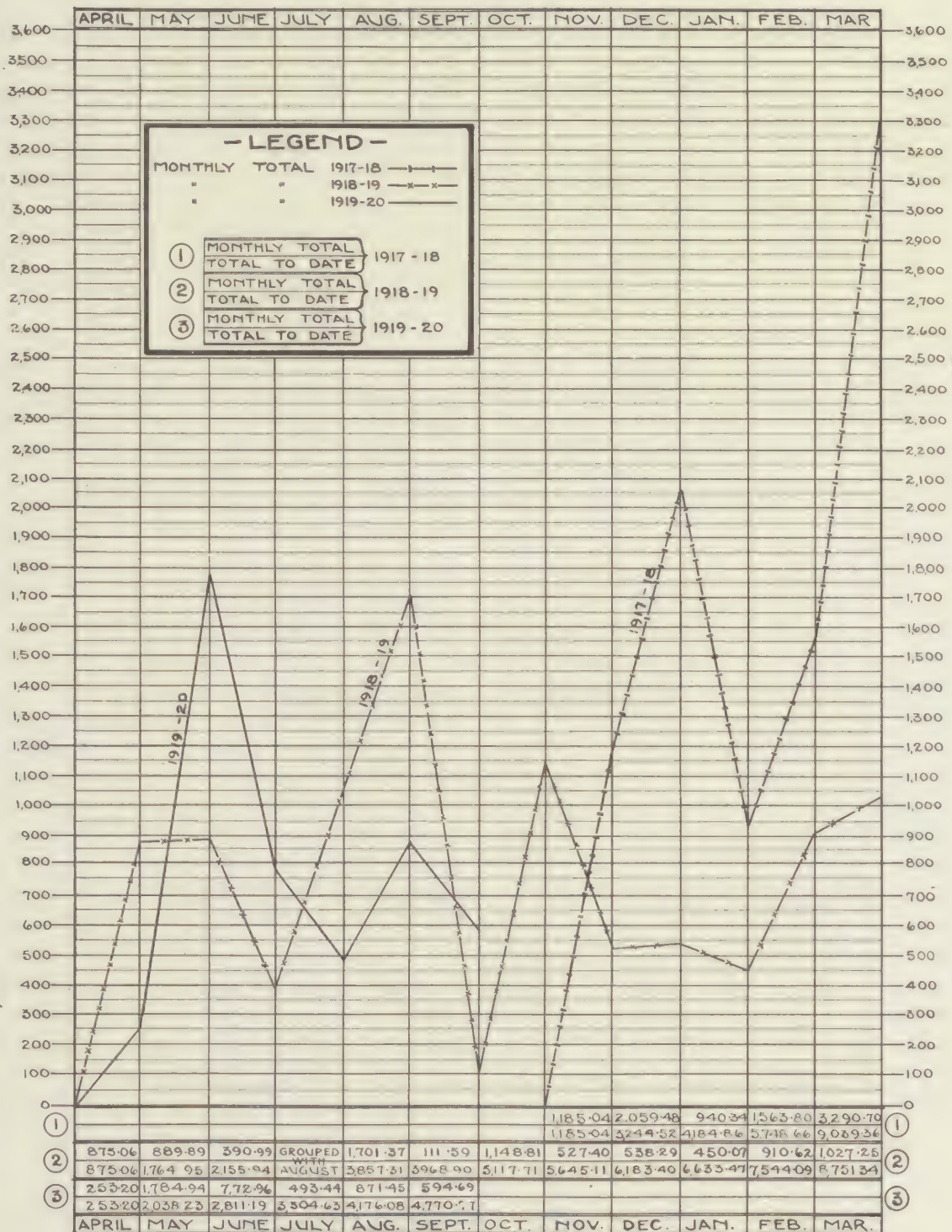
Purchases in sub-branches are handled by a Purchasing Clerk, under the supervision of the Assistant Director in charge of the Unit, who is authorized to place orders locally, only up to the value of \$50.00. Copies of all such orders are mailed, as issued, to the Chief Purchasing Agent, Ottawa, for audit. When requisitions are received in the Units for material, the value of which is more than \$50.00, but under \$500.00, tenders are first obtained by the Purchasing Clerk from local manufacturers and merchants and the requisition is then forwarded with all

such tenders to the Chief Purchasing Agent, who either approves the requisition for local purchase or proceeds to obtain additional tenders, as the circumstances may warrant. Requisitions received in the Unit offices for supplies, the value of which exceed \$500.00, are forwarded direct to the Chief Purchasing Agent, Ottawa, for action in accordance with the requirements of the War Purchasing Commission.

By this system, not only can quick and efficient service be given to all branches of the Department, but all purchases exceeding the sum of \$50.00 are specially dealt with under the personal supervision of the Chief Purchasing Agent and the War Purchasing Commission. The Chief Purchasing Agent is kept continually informed of all purchases made for the Department throughout the Dominion, for smaller sums than this. This control not only ensures purchases being made to the greatest advantage, but enables the Chief Purchasing Agent to secure a uniformity of supplies at all points, which would not otherwise be possible. Furthermore, it has made possible the standardizing the greater part of equipment, which in this way can be purchased for many points at the same time and, consequently, in large quantities, resulting in the procuring of it at the lowest possible cost.

A new feature in departmental purchasing has been adopted in the Department. It has been realized that the saving of a cash discount, even if it is as low as 2%, will amount to a considerable sum on a large turnover. The accounting and checking systems employed are such that the saving effected, in this direction alone, pays a large proportion of the cost of maintaining the Purchasing Branch at Head Office. The cash discounts referred to are in addition to the trade discounts which the Department secures.

DEPARTMENT OF SOLDIERS CIVIL RE-ESTABLISHMENT DISCOUNTS EARNED



PREPARED BY
ACCOUNTING BRANCH
DEPT. OF SOLDIERS CIVIL RE-ESTABLISHMENT
OTTAWA

CHART D-3

Accounting Branch

This Branch is under the control of a Supervisor of Expenditures who is responsible for all expenditures incurred by the department and the preparation of all statistics and statements relating to accounts.

No effort has been spared by the Department to make this branch of the work as efficient as similar departments in large commercial enterprises. The latest improved methods for obtaining reliable figures have been adopted and an effective control over all expenditures is the continual aim of the executives. Owing to the rapid increase in the operations of the Department, many changes in the routine have been necessary from time to time and such changes have always been towards greater efficiency and greater control of expenditures.

GENERAL ACCOUNTS

Before any purchase may be made by Head Office or the Unit Offices, a purchase requisition is issued on the Purchasing Branch by the Storeskeeper. This requisition is made out by the Storeskeeper, showing the "description of the material required," "purpose for which it is required," and the "Branch requiring same." Absolutely nothing is purchased direct from vendors by the heads of any branch, as the Assistant Directors of the Units are held responsible for all goods that are ordered to be purchased. To prevent over-buying, all requisitions are checked over by the Purchasing Branch to determine whether there is or is not any of the goods required on hand, or on order.

Copies of the purchase orders for all goods ordered to be bought are sent to the Storeskeeper as a notification that such and such goods have been ordered, but does not show the quantity ordered, thus necessitating the actual count or weight of each lot of goods received.

Upon receipt of receiving slips from the Storeskeepers of the various stores to where the goods have been shipped, they are filed in a file and held until the copy of the invoice is

received. Upon receipt of invoice, the invoice is checked against the receiving slip, also with the purchase order. The invoices are then listed on an invoice register and forwarded to Ottawa where they are carefully examined. No account is passed for payment unless it agrees with the quantities shown on the receiving slips and with the prices as shown on the purchase orders.

These invoices are coded and marked as follows:

1. With the Code Number representing Office or Institution chargeable.
2. With the Code Letter representing the month to which the account is to be charged.
3. With the Account Number designating the sub-accounts to be charged.

A distribution of all accounts payable is made on the invoice register under the following headings:

1. Capital Expense (Buildings, Equipment and Stores).
2. Administrative Expense.
3. General House Expense.
4. Kitchen and Dining-room Expense.
5. Medical Expense.
6. Vocational Expense.
7. Farm and Garden Expense.
8. Engineering Expense.
9. Information and Service.

Further sub-divisions are made of every one of the foregoing accounts, varying from 25 to 150 classifications.

After the distribution of invoice registers has been checked at Head Office, cheques are issued in payment of every account and are mailed direct to the vendor.

All accounts are paid seven days after their receipt at the Head Office. In this way the Department is able to take advantage of all discounts for prompt payment, thus effecting a considerable saving to the country.

SALARIES AND PAY AND ALLOWANCES

All salary and pay and allowance cheques are issued from the Unit Offices, these being the only cheques which are not issued in Ottawa. As soon as cheques have been issued, the payrolls are forwarded to the Head Office, together with the duplicate copies of cheques. Each duplicate copy is carefully examined and passed by an Auditor of the Department.

An individual ledger account is kept at the Head Office for every member of the staff of the Department; for all patients on its strength for treatment and men in receipt of Vocational pay and allowances.

Copies of all orders affecting the pay of staff, patients, or men undergoing Vocational training are received at the Head Office and checked with the individual record. By this means unauthorized payments or discrepancies in pay are immediately adjusted.

A daily return of all cheques issued by the Unit Offices is made to the Head Office, Ottawa, which must agree with the total amount as reflected on the payrolls made up on that date. A special invoice register is prepared for salaries and pay and allowances. A distribution under the same headings, as those shown for General Accounts, is made on this register.

The work in connection with the pay and allowance ledgers alone involves over 24,000 postings a month. In addition to this a great deal of correspondence is carried on with the Board of Pension Commissioners and other Government Departments.

COST ACCOUNTING

A summary of accounts chargeable to each account number is made on the invoice register, and from this summary Hollerith cards are punched, which constitute a record of all classified expenditures for each office and institution. At the end of each month, these cards are run through the tabulating machine and balanced with the control ledger for the different expenses of the Unit under the main account headings already mentioned. When records are written by hand it is necessary to write the quantity

and amount three times in order to distribute the information in three different ways, but when machine punch cards are used the distribution is obtained automatically by a simple sorting process.

The amount of information which it is possible to obtain by the use of machine punched cards is almost limitless. Nearly every question regarding an account can be ascertained by these cards.

The advantages of the machine punched cards are as follows:

1. Possibility of securing greater detail in analysis than by hand.
2. Less time required in securing this analysis and preparing monthly statements.
3. Work proved each day and no delay at the end of the month in proving trial balance and subsidiary records.

All accounts are numbered and a series of numbers has been provided for each department of an institution in order to show expenditures for requirements and replacements to keep equipment in its original efficiency for service, the sum of which represents operating costs.

GENERAL STORES

All expendable supplies and material are taken into and charged to Stores, in the first instance, and no supplies or material can be withdrawn from Stores except on authorized requisitions. As soon as withdrawals are made from Stores, a journal voucher is issued crediting the Stores account and charging the proper account to which such supplies are chargeable.

At given periods a physical inventory is taken of the material and supplies in the various Stores throughout the country, and the value of the goods in Stores at the time the inventory is taken should agree with the balance charged to the Stores account on the Head Office ledgers. All supplies and material in Stores at the time of taking the inventory should also agree with the records which are kept by the Superintendent of Supplies and Equipment.

STAFF RECORDS

A monthly return of the staff of the Department is prepared by the Accounting Branch, which shows the following information:

1. The number of employees in each Unit.
2. Classification of duties performed.
3. The salaries chargeable to each Branch.
4. The number of returned soldiers, and civilians (male and female) employed in each Unit.

A Hollerith card is punched for each member of the staff, thus enabling the Accounting Branch to prepare, at any time, a return, by Units or Sub-Units, showing the classification of duties, salary paid, number of returned men and civilians employed, and so forth.

ATTENDANCE RECORDS

An account is kept for every member of the staff at Head Office, in which is recorded their attendance. This account shows who is absent from duty, the reason for such absence, time lost in the morning, at noon, or by leaving before authorized time at night, and the lost time recovered by working overtime. A daily report is made to the Heads of Branches of members on their staffs who have lost time during the day.

RELATIONSHIP OF HEAD OFFICE ACCOUNTING
BRANCH TO AUDITOR GENERAL
AND FINANCE DEPARTMENT

The Head Office Accounting Branch is closely linked up with the Auditor General's

Branch and the Finance Department. Daily returns are furnished to the Finance Department of all cheques issued, not only by the Head Office at Ottawa, but by each Unit Office. Letters of credit are issued by the Finance Department to the Department of Soldiers' Civil Re-Establishment on application by the Supervisor of Expenditures, who is responsible to the Finance Department for a correct return of disbursements made.

A monthly statement of cheques issued is furnished to the Auditor General and is supported by a certified voucher for each payment made, on which is shown the number of the cheque issued in payment. A copy of each paid voucher is filed in strict alphabetical order in the Record Branch of the Accounting Office.

PURCHASE LEDGER

An account is opened for every firm or individual from whom purchases are made and to whom cheques are issued. This account is credited with the amount of the account rendered and debited with the amount of all cheques issued in payment thereof. The amount of business with any firm, and the total payment made to any individual, is thus immediately available. A book-keeping machine has been installed for the purpose of keeping the purchase ledger accounts and, owing to the rapidity and accuracy with which accounts can be posted, the bookkeepers are enabled to balance their accounts daily.

RFML 1
20

NOV 7 1955 *gb*

UB 360 qC199c 1919

14030690R



NLM 05098475 5

NATIONAL LIBRARY OF MEDICINE